

Stanford

Computer
Science

Software Faire 2015

Senior projects for

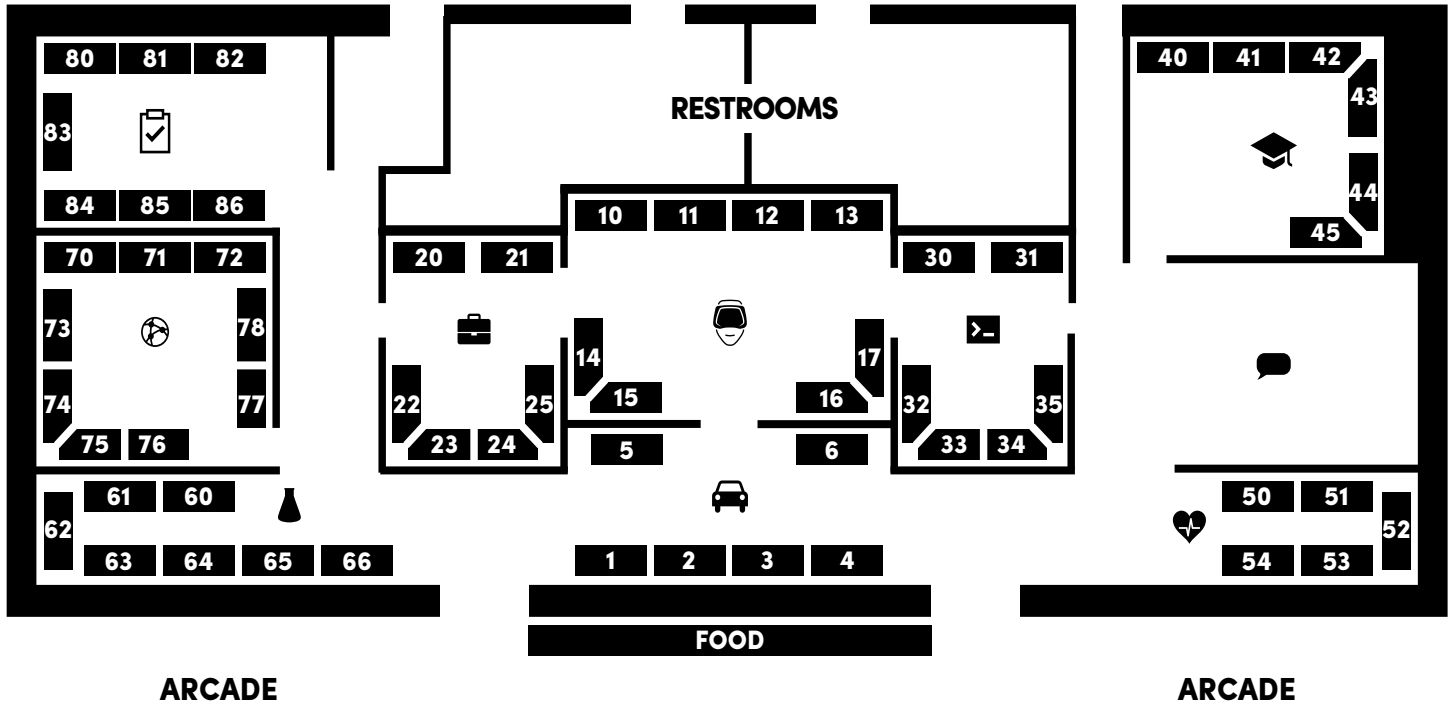
CS 191 Senior Project

CS 194 Software Project

CS 210 Software Project Experience with Corporate Partners











Faire Showcase Map

⚡ JUDGING AND STAFF ROOMS UPSTAIRS ⚡



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|  Virtual Reality and Wearables | 10-17 |  Research | 60-66 |
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Drone solution for finding parking | CS 210 |
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| 1 | Parq by IBA
<i>Calvin Studebaker, Raymond Kennedy, Leigh Hagestad, Narek Tovmasyan</i>
App to make finding parking easier | CS 210 |
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| 2 | Osprey Drones
<i>Tyler Fallon, Raymond Chan, Seth Hildick-Smith, Sean Kemper, Aditya Sarkar</i>
Drone solution for remote car filming | CS 210 |
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| 3 | Road Heading
<i>Moustafa Asfour, Anthony Fowler, Cleophus Robinson, Sharleen Tu</i>
A place to share and discover road trips | CS 194 |
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| 4 | Solar Car Telemetry: Daisy
<i>Kelsey Josund, Gawan Fiore, Harrison Ho</i>
Telemetry for the Stanford Solar Car Project | CS 194 |
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| 5 | Team Conduit
<i>Nathan Eidelson, David Eng, Sherman Leung, Nisha Masharani</i>
Electric vehicle owner network to improve public charging | CS 210 |
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| 6 | Zephyr
<i>Bridge Eimon, Megan Faulk, Jason van der Merwe, Miraj Rahematpura, Austin Whittier</i>
App to help novice racers improve lap times | CS 210 |
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Build virtual worlds in virtual reality
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- 11 GraviTeam by VRTEX** CS 210
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Team building experience for virtual reality
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- 12 SyncRow** CS 210
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Arun Kulshreshtha, Wendy Shi, Ben-han Sung, Alex Wang
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- 16 Koblt** CS 210
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App to simplify the on-campus housing process for students
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Deep Dive

CS 191

Analytics on Large Scale Graphs with Attributes Sheila Ramaswamy

Representing data as a graph with attributes can allow data scientists to discover valuable insights about the different entities found in the data. As more and more data becomes available, it has become more and more important to have a scalable implementation of such graphs. Prior research has focused mainly on graph structure, rather than delving into how node and edge attributes could be implemented efficiently. In this project, I looked at the tradeoffs involved with implementing graphs with attributes, focusing on three different representations. Furthermore, as a case study, I examined how an attributed graph optimized for sparse attributes can be used by data scientists to transform unstructured data (such as json) to a more structured format (such as a tsv).

Automating the Analysis of Dendritic Spine Data Sets Druthi Ghanta

Synapses are the basic units of neural function and computation that allow neurons to transmit information to one another. From neural development to neurodegeneration, we study synapses to understand the processes that dominate the human brain. A structural correlate of the receiving end of a synapse is a dendritic spine which is a protrusion from a neuron's dendrite that receives input from a single input called the presynaptic nerve terminal. These spines can change in shape and density over time, correlated with learning and new experiences. Modern imaging techniques allow for visualizing and tracking the changes in dendritic spines on neurons located in different brain regions. However, automating the analysis of these spine data sets is not yet the status quo in image analysis. In this project, I attempted to evaluate both existing methods and a novel means to automate the identification of dendritic spines.

Convex.jl Jenny Hong

Convex.jl is a modeling environment for disciplined convex programming (DCP) in Julia, an open-source scientific computing language. Convex.jl translates problems from a user-friendly functional language into an abstract syntax tree describing the problem. This concise representation of the global structure of the problem allows Convex to infer whether the problem complies with the rules of DCP and to pass the problem to a suitable solver. The codebase for Convex is available at <http://github.com/JuliaOpt/Convex.jl>. Currently, Convex.jl is developed and maintained by Madeleine Udell, Karanveer Mohan, David Zeng, and Jenny Hong.

Data Serialization Syntax Brandon Azad

The Data Serialization Syntax (DSS) is an abstract syntax for describing data structures along with associated semantics defining how these data structures are serialized. The ultimate goal is to build a source-to-source compiler that translates a DSS data structure into an equivalent data structure in some target language together with serialization and deserialization routines. Polymorphic types, higher order types, and value-based subtyping of algebraic sum types will be supported. The DSS semantics are flexible enough to accommodate different serialization formats, and so the syntax itself is not tied to a particular protocol or implementation.

Dina Estefania Ortiz, Hassan Karaouni

Dina is an online platform aiming to connect high school students with questions to educators with answers. We've deployed a Q&A platform to local schools and plan to continue work this summer.

DST JobWorks Steven Qian, Tony Wang, Camilo Arevalo

DST JobWorks is a job application geared towards homeless members of the Downtown Streets Team. It focuses on allowing the members to comfortably show their skills, build a profile, increase their exposure, and tell their story.

Espresso Vivek Sanjay Jain

Espresso is a JavaScript optimizer (i.e. it compiles from JavaScript to faster JavaScript). JavaScript is one of the most popular languages in use today - it enjoys a monopoly as the sole (cross-browser) programming language of the web, and now with node.js is the fashionable choice for web servers (and is even used in some desktop applications). While reasonably fast, high-quality JavaScript engines exist, they have to do all of their work at runtime and consequently have to make certain tradeoffs. Espresso attempts to address this by statically optimizing JavaScript code to enable it to run faster in existing JavaScript engines.

ForgetMeNot Stephanie Zhan

The Tickler File, reinvented. For those of us who need a little extra help remembering things about the people and events around us.

Hephaestus Michael Precup, Maximillian Wang, Jay Moon

Hephaestus is a tool that allows you to design and test DFAs, NFAs, and Turing Machines. It also supports submission of automata for grading, and is currently in use in CS103.

Low-Cost LED Wall Matt Lathrop

The Low-Cost LED Wall is 20' x 40', contains 20,000 LEDs, and was built for around \$10,000 -- less than 1/10th the cost of a professional product. The project's goal was to make this stage sized LED Wall look similar to and work as well as commercially available products. To accomplish this we wrote a suite of software for controlling the wall. We also took images of the LEDs to detect their color output and correct the color on a per-pixel basis so that the entire wall looked uniform despite our use of inexpensive LEDs. This project was a joint project between the Stanford Computer Science Department, the Stanford Theatre and Performance Studies Department, and several student groups on campus.

Software Faire 2015 Deep Dive

CS 191, continued

Mean Switch Jason Clavelli

Software Defined Networking (SDN) is a new approach to designing networks that improves their flexibility by separating the control plane from the data plane. One obstacle that the SDN movement faces is the difficulty of programming controllers correctly. Mean Switch is a custom SDN switch that acts as a diagnostic tool for finding bugs in real controllers. To demonstrate its effectiveness, we used it to find bugs in two controllers: Floodlight and Frenetic.

Medical Pill Image Recognition Raiyan Khan

Approximately 70% of Americans regularly take at least one prescription drug, while more than half take at least two. Unidentified prescription pills create potential health hazards for individuals. This danger is exacerbated by the 90% of the US population over the age of 65 who are prescribed drugs and may be prone to misidentifying them. This project develops a recognition system for identifying photographs of pills (which can easily be taken via cell phone). The pill image recognition algorithm extracts identifying features such as shape, color, and imprint, in order to classify the pill in the image.

Mouse Model for Eyeball Arthur Brant

We synthesize gene expression data from a large number of datasets/studies to identify important expression differences between the mouse model and human eye for macula degeneration.

Portal Wars Ian Proulx

Portal Wars is a futuristic first-person shooter video game developed in Unreal Engine 4. It combines the traditional first-person shooter game play with the ability to spawn portals around the map, adding a completely new element to the game, tactics, and strategy by enabling players to instantly teleport. The game is multiplayer and is the beginning of what I hope to eventually be a full-fledged game for PC, Xbox One, and PS4.

Prosync Shubham Goel, Saurabh Sharan

Prosync is a software solution to accurately synchronize music across a cluster of machines. MPD servers are used today to power and sync speakers at giant conference centres and banquet halls, and the current music sync solution involves cumbersome hardware devices upwards of \$3000. Our first version is an MPD proxy that works over a cluster of MPD servers from a single MPC client. Prosync removes the hardware from the picture by providing a simple software interface and making it frictionless to integrate with existing MPD clusters. The abstractions we've developed can also easily be extended to support other protocols over devices like mobile phones, laptops etc. Thus, whether it's powering up a conference centre, a beach party or a good-old get-together with close friends, use Prosync to power and synchronize your speakers while you enjoy!

Pulse Henry Thiemann, Ben McKenzie

Pulse is all about changing the way that people listen to music. We have crafted a musical experience that gives users the ability to interact with the individual components of a piece of music, thus immersing them in what they are hearing. Pulse uses intuitive mini-games to draw the users attention to the melodic and rhythmic aspects of each part of a song in a fun and engaging way. By familiarizing users with the individual components of a song, we give them perspective on how each contributes to the synthesis of the song as a whole. Users can then pick and choose which components they want to hear, and craft their own custom soundscapes.

Quoting POTUS Justine Zhang

Given space constraints, news outlets necessarily have to be selective in choosing what to report. My project explores the idea that this selectivity encodes biases present in each outlet, which can then be computationally extracted. Using a dataset of quotes from President Obama's addresses which were cited by news outlets throughout his tenure, I characterize quoting patterns and their latent biases according to time, topic and linguistic style.

RoboBrain Query System Michela Meister

RoboBrain is a knowledge graph to help robots navigate their world. In this project we explore three different ways to parse natural language questions into queries on the graph.

Roomie Nico Cserepy, Anna Yelizarova

Roomie is a web app that helps students to navigate Stanford Undergraduate Housing System. When it comes to housing on campus, a lot of information is only available through word of mouth. We aim to connect students to information so that they can make well informed decisions when it comes to choosing next year's housing. Roomie is an ongoing project. We are currently working to populate the website with user generated content. Our next step will be to implement further interaction possibilities between users to help them find roommates. We aim to launch Roomie in time for the Housing Draw next Spring.

Smart Scene Interaction for Text2Scene Mihail Eric

How might we allow people to create 3D scenes using simple natural language? This senior project aims to build out the scene interaction component of the text2scene system designed by Angel Chang. In particular, it focuses on developing advanced semantic parsing techniques for extracting information along with developing sensible semantic representations of scene commands that can be properly interpreted by the system.

Solo. Kamakshi Duvvuru

Personal narratives are being shared online at a rate unlike any other time in history. The ability to automatically measure relevance between two personal narratives has powerful implications for social computing. Though there are several models of semantic similarity in the natural language processing realm, they do not leverage the aspects that separate narrative from expository text. This project presents a new model, based on the notion of a "common motif dictionary", for measuring relevance between narratives in light of their unique nature.

Software Faire 2015 Deep Dive

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AdForAll Inseong Cho, Chan Lee, Daniel Liem

AdForAll is a location based ad-platform for small business owners looking to have full control over the way their coupons and ads are shared. We are democratizing the mobile ad platform by giving the power back to the small business owners.

Annomate Ben Blankenmeister, Stephen Cobbe, Helen Chavez, Brian Wai

Annomate is an application centered on video annotation, designed to enhance in-class and remote learning for university-styled classes. In the current SCPD paradigm for remote learning, students passively view lecture recordings, leaving them few opportunities to actively engage with the lecture material. Remote learners are entirely dependent on their in-class peers to ask relevant questions, else they must pose their own questions through alternative means, such as Piazza or office hours. As helpful as these alternatives may be, they are far removed from the lecture itself, which makes it challenging to precisely discuss specific parts of the lecture. Our application, Annomate, addresses this challenge by providing remote learners the ability to post comments on specific, time-based segments of a given lecture video.

Catan Vincent Paul Carroll, Puneeth Gadangi, Cynthia Day

The classic board game Settlers of Catan, finally translated into an beautiful browser-based application. Players can try to defeat any of our six AI, from Alexander the Great, who builds a formidable army, to Aeneas of Rome, who founds magnificent cities. If they're in a more sociable mood, they can challenge their friends. Or why not challenge a friend and an AI at the same time?

ClassPath Pat Boonyarittipong, Devon Hinton, Gary Olivera, Dalton Petursson

ClassPath is a web-based application that simplifies academic career planning and course discovery for undeclared Stanford students. Through the team's personal experience and user research, it is evident students need a more intuitive and radically different solution to plan their Stanford career than the currently available tools. Unlike other text-laden, complicated solutions offered by competitors, ClassPath walks a user through each Computer Science track, assists her in selecting upper-level "capstone" classes she is interested in, and finally generates a tree representation of her 4-year plan. With this groundbreaking approach, intuitive design and solid engineering team, ClassPath will be a commanding entrant in the education technology space.

DermAid Angad Gogia, Lindsay Willmore, Aaron Holden, Joel Gottsegen

DermAid brings the cutting edge in computer vision to a user friendly app aimed at helping the average consumer identify his or her own skin conditions. Backed by existing deep learning architectures, customized to our task, the application achieves high accuracy and gives patients as well as general practitioners a reliable research tool. We hope to help people everywhere manage their own dermatological health.

Eduvention Trey Deitch, Thuy Ny Le, Bryson McFeeley, Lucas O'Connor

More students than ever are now majoring in Computer Science, but many struggle to learn proper programming techniques and style. Eduvention aims to fix that. Our software includes an Eclipse plugin for students and a web app for TAs. Students get alerts suggesting they add more comments or decompose their code, ask for help from TAs, and receive answers, all within Eclipse and all in real time. TAs use the web app to view their students' latest code (uploaded automatically), make comments on it, and answer student questions. This combination allows students to learn good style habits without interrupting their flow.

Elixir Tanner Gilligan, Abraham Starosta, John Ekins

Our website provides a medium through which individuals can become informed about controversial and lesser-known medical topics. We facilitate this learning by creating a common place where doctors and users can collaborate and discuss the issues at hand, as well as provide useful resources for users to engage with the topic.

Foodbook Connor Woodson, Jessica Sagen, Ryan Ballenger

Foodbook is the new way to find something to cook. It helps people maintain a healthy diet with economic and delicious meal options. More specifically, Foodbook solves the problem of not knowing what simple meals you should be creating. Our web application lets users find tasty recipes in only three clicks. It also connects users with a community, who provide each other with reviews, tips, and their favorite recipes.

Lawyer Link Manni Cavalli-Sforza, Michael Hang, Bavin Ondieki

People have legal questions and don't know where to start. Their network is their most trusted source for advice and referrals. There is an opportunity to create a platform that combines social networks with legal resources. We are a referral engine that taps into a user's connections in different social network platforms; such as Facebook, to recommend the most appropriate lawyer to meet their needs. By leveraging the power of these connections, we seek to recreate the organic fashion through which people find lawyers in real life, in an engaging and easy to use platform.

Mews Kelvin Do, Kevin Lu, Remy Xue

Mews is a new way to see where important news is happening around the world. Visualize your news by where it's happening. Which cities have the most going on? Where are the biggest stories around the globe? Find it all in Mews.

mydo Henry Thiemann, Ben McKenzie

Mydo is an entirely new way to think about both creating and completing your todo list. Forget about keeping track of tasks yourself; let our app figure it all out for you. Our team of crowdworkers will create tasks for you based on free text input and your email. If that's still too much work, you could even get away with not doing some of the items on your list, if you let our API ask participating businesses if they want to take care of things for you.

Software Faire 2015 Deep Dive

CS 194, continued

NoteMap John Newcomb, Erin Singer, Pat Briggs

Taking notes in computer science classes is hard. NoteMap aims to solve that. NoteMap is a website that understands the relationship between your notes and your code, helping you efficiently document and organize your notes. NoteMap's key feature is a dual interface that allows you to map a line or block of code on one side to a note on the other. We believe this main feature, along with the ability to organize notes within searchable notebooks, makes NoteMap the very first note taking service built specifically for programmers.

Ravenswood Reads Toolkit Juliana Cook, Elena Frey, Meredith Marks, Lucas Throckmorton

Ravenswood Reads is a program out of the Haas Center for Public Service that promotes early literacy education in kindergarten through third grade students in neighboring communities. Our iOS app helps facilitate the tutoring experience by digitizing the research-based curriculum used in the program. Effective and engaging lesson plans are easy to create and execute on the app, which also includes built-in activities for the student. With games like Letter Tiles, Picture Sorts, Bingo, and Memory, the activities focus on building an understanding of fundamental phonics patterns and emphasizing memorization of sight words.

Road Heading Moustafa Asfour, Anthony Fowler, Cleophus Robinson, Sharleen Tu

Road Heading is a web application that provides a home for road trip enthusiasts and new travelers alike to discover, share and create road trips collaboratively with friends. Users can either browse pre-made trips for inspiration and customize these templates, or create new road trips from scratch by finding and adding individual stops.

Sessions Emily Field, Viraj Bindra, Jenny Chen, Emma Guth

Sessions is an intimate network for fans and artists that allows music aficionados to directly request content and communication from their idols, while allowing artists to reward their biggest advocates. The product is a solution to the gap between the millions of fans that artists have and the much smaller proportion of those fans who actively drive engagement and contribute to the natural growth of the artists' following. Sessions allows superfans to play an active role in requesting specific content from the artists they follow, and offers artists tools to submit responses to these requests, host their own contests, and offer local offers through the platform as well.

Shoewiz Neal Khosla, Vani Khosla, Vignesh Venkataraman

This app allows a user to either take or upload a photo of a shoe and retrieve visually similar results, using the magic of deep learning and computer vision. Users can view shoe details and metadata, pin favorites, replay searches, discover random shoes, follow links to purchase shoes, and even use existing shoes as the basis of new searches. Additionally, users can pick their choice of sorting metric (color, shape, or both!) and optionally white out photo backgrounds for better results. Social features are also included!

SocialMe Kelsey Young, Mariam Ghanbari, Matt Duhamel

SocialMe is a geolocation-based social network that offers users with a deeper understanding of those around them. By providing people with more information about those in their immediate surroundings, the door to a multitude of new opportunities can be opened. Potential business relationships as well as romantic relationships can form organically by offering enough information for people to feel comfortable approaching each other in person.

Solar Car Telemetry: Daisy Kelsey Josund, Gawan Fiore, Harrison Ho

The Stanford Solar Car Project is the premiere American solar car team and the best undergraduate team in the world, and the telemetry system is software that connects the team to data generated by the solar car. More than a hundred variables stream continuously from the car over local wifi during car operation, and the telemetry system parses and presents this data in a friendly, human-readable format. During the competition, understanding all of the systems within the car is of critical importance to successful race performance, allowing informed decision making regarding speed, pitstops, and energy usage.

Solstice William Chen, Steven Vellon, Henry Wang

Solstice is an Eclipse plugin that allows for remote, real-time paired programming. It can coordinate two users to streamline collaboration on an individual Eclipse Project. It boasts an easy-to-use UI as well as a robust back-end server to easily manage real-time updates and changes between users.

Spearmint Amy Nguyen, Andy Moreland, Leo Martel, Stephen Koo

Spearmint is a GitHub-integrated code quality service. Coding standards are important, but no one reads style guides--and linters are a pain to configure and easy to forget about. Enter Spearmint: just sign up with GitHub and choose projects to watch. Spearmint will automatically run code quality checks on every pull request inside a secure, private virtual machine and display the results directly on the GitHub pull request page, no interaction needed. For devs looking to go the extra mile, Spearmint also provides a web application that allows users to tweak settings, see more detailed failure reports, and keep an eye on code quality statistics like cyclomatic complexity. Spearmint: freshen up your code!

Tactile VR Ifueko Igbinedion, Kevin Malinak, Sean Stanko

Recent advances in VR technology has made virtual worlds look and sound more and more compelling; What if you could also feel these worlds? Tactile VR addresses this question by providing physical, haptic feedback to the user in conjunction with the Oculus Rift and Leap Motion technologies.

Topix Conor Eby, Nate Nunez, Cem Kadioglu, Lingtong Sun

Topix is a photosharing app for Android that eliminates the need for external validation built into existing social media platforms. By making users anonymous, we allow them to view and add to the topic-specific feeds they care about without having to worry about what their friends might think. Topix awards karma points for in-app activity and ensures you always see the most premium content through an upvoting system.

Software Faire 2015 Deep Dive

CS 194, continued

TweetBoard Pedro Sanzovo, Anna Brezhneva, Zach Ellison, Paul Martinez

TweetBoard is a data visualization platform to help users better understand their presence and impact on Twitter. Tailored to politicians running campaigns, TweetBoard provides easier access to important information through simplified analytics and powerful visuals that will help users improve their presence on Twitter and run more effective and impactful campaigns.

Virtual Collab Fan-Hal Koung, Pinnaree Tea-mangkornpan, Dennis Wang, Hanna Winter

Virtual Collab is a web-based chat room that encourages real-time collaboration. The product targets the college student and instructor population. Virtual Collab simulates the experience of students working together in a study room or at a TA's office hours for those who either do not know other students in the class or require more flexible hours. Features such as shared whiteboard and document viewer, user anonymity, and sub-chat rooms provide convenience and encourage free-flowing discussions. Virtual Collab distinguishes itself from other notable existing classroom-assistance products, such as Piazza, by emphasizing the real-time nature of collaboration.

CS 210

ConnectedDrone Ellen Sebastian, Michael Weingert, Shaurya Saluja, Kevin Heh, Alejandro Ceballos

ConnectedDrone is your drone-based parking solution. Working with BMW, we developed a platform for drivers to harness a bird's-eye perspective to find available parking spaces in a crowded parking lot. Stop by the Stanford Oval (across Serra Mall from here) at 1PM or 2PM to see our product in action and test it out for yourself!

Curve by WatchIt! Jocelyn Neff, Abaho Katarbarwa, Kuan Peng, Ismael (Ish) Menjivar

Curve by WatchIt is a wearable application utilizing the Samsung Gear S Watch, Thalmic Labs Myo, and an Android Galaxy S phone to help a user improve their golf swing. The Myo device tracks a person's swing arc so it can be displayed to the user. Curve also tracks certain swing metrics so that users can learn how to improve their unique swing. After the user has input a certain number of good and bad swings, the application will suggest how to alter their swing to best match their nominal swing.

DVation Andrew Giel, Jonathan NeCamp, Hussain Kader, Santiago Seira

DVation presents IT.issue, a next-generation Information Technology Service Management solution. IT.issue leverages machine learning to allow IT Admins to resolve client tickets quicker and easier, while also incorporating modern web technologies absent from ITSM products on the market.

GraviTeam by VRTEX Cody Karutz, Alec Winograd, Kyle Dumovic, Roshan Vid, Xiaonan Tong

VRTEX presents GraviTeam, a fast-paced virtual reality (VR) team-building experience that uniquely combines an Oculus Rift, a Microsoft Kinect, a Leap Motion and an Android phone. This platform augments the Unreal 4 Engine with existing web technologies to engage multiple non-VR users into a VR experience with networked devices at low latencies. The team must collaborate to pilot a shuttle around the International Space Station to evacuate stray astronauts before an asteroid hits. The GraviTeam experience is one example in a product line of MicroRetreats, where teams collectively harness new technologies that foster interpersonal development and communication skills.

Jarvis Mindy Huang, Jithin Thomas, Raven Jiang, Ryan Diaz, Audrey Ho

Ever wanted to build a virtual 3D world? Well, now's your chance. Using the Oculus Rift, Razer Hydra, and Unreal Engine, we have created an experience to make you feel like Tony Stark. Come check out Team Jarvis, try out our demo, and build cool things in VR!

Karaage Arun Kulshreshtha, Wendy Shi, Ben-han Sung, Alex Wang

Game design traditionally is limited to the standard workstation and a 2D monitor. However, this setup doesn't provide the sense of perspective, scale, and immersion that designing virtual reality content demands. Putting on and taking off the headset multiple times over the span to verify that things "feel right" wears on developers really quickly. We worked with Epic Games to create the Karaage editor: an immersive and delightful VR level designer that simplifies the greying workflow. Build for VR, in VR! Check us out at <http://karaage.io>!

Kobl Aaron Broder, Andrew Khor, Brian Lam, Nhien Tran, Travis Le

Kobl is an SDK for connecting Oculus Rift devices (via Unreal Engine) and any web-connected device. Our product is targeted at developers, VR or web developers, who are interested in building unique experiences that leverage the use of both VR and non-VR devices. Our platform will be crucial to the development of virtual reality as a consumer product by enabling innovative experiences.

Osprey Drones Tyler Fallon, Raymond Chan, Seth Hildick-Smith, Sean Kemper, Aditya Sarkar

For decades amateur racers lamented the inability to rewatch their drives. These drives were what they lived for. Yet there was no convenient way of being to review them and self reflect. There was no affordable way to share the experience and bask in the glory of what is motor racing. Osprey Drone Software allows unmanned vehicles to take spectacular video footage of race car drivers going around the track. After the driver inputs points on the track they want footage to be captured, our software accounts for the limits off the drone such as speed, range and flying time and subsequently provides the optimal path for the drone in order to capture as much of the driver's requirements as physically possible. When the driver returns to the pits, there will be a highlight reel of his most recent escapade of speed, awaiting.

Software Faire 2015 Deep Dive

CS 210, continued

Parq by IBA Calvin Studebaker, Raymond Kennedy, Leigh Hagestad, Narek Tovmasyan

PARQ is a free iOS app designed to eliminate the stresses of parking in San Francisco. Focusing on safety, pricing, and avoiding tickets, Parq is the first application of its kind to show you the best spots that fit your specific parking needs. Parq also helps you relax when you're no longer behind the wheel. Parq sends you real-time push notifications when your car is damaged or illegally parked. Parq relies upon publicly-available city data as well as user-generated reports to provide the most accurate, helpful, and up-to-date information about the spots around you. With Parq, you can park fearlessly.

PredictionIO Classifier Ling-Ling Zhang

Created a custom predictionIO template which utilizes the Natural Language Processing capabilities of Stanford's CoreNLP to do sentiment analysis.

Ruby on Rails Alex Grover, Brandon Gottfried, Ryan Perez, Steven Longoria

We built a visualizer for Ruby on Rails projects. It scrapes the project directory and provides an interactive visualization based on the models in the project and their relationships. We hope that this would be useful to developers that are new to a project to help them understand the project's architecture and get them up to speed more quickly.

Spark by TreeSAP Joseph Baena, Jorge Aguirre, Brian Jang, Joel Kek

Spark by TreeSAP is a web application that brings the Business Model Canvas (BMC) to a digital and collaborative environment for businesses of all sizes. The BMC is a visual tool for capturing aspects of business model strategy, including revenue structure, customer segments, and value proposition. We cater to different levels of detail as enterprises create, manage, and share BMCs for new and existing projects. Spark allows for asynchronous contributions, saving through versioning, and facilitating an open discussion via live chat among collaborators. Our goal is to be the GitHub of business development for capturing the spark of innovation.

StacksWare Vivek Nair, Phillip Jones, Forrest Browning, Doug Safreno, Rahul Mitra

StacksWare is an agentless license management solution for VDI, virtual desktop infrastructure, which allows organizations to track their application usage and determine whether they are in compliance with their license agreements. Our software gathers application usage via the ESXi hypervisor, eliminating the need to install an agent on every virtual guest OS.

SyncRow XiaoSong Mu, Kevin Ramdass, Megan Hansley, Gavilan Galloway, Alexander Zamorzaev-Orleanschii

SyncRow is a coaching software that provides data insights for competitive rowing teams using wearable technology. Utilizing the Samsung Gear S smart-watch as a sensor platform, SyncRow collects geographical, physiological, and motion data and helps teams and coaches train more effectively. Current solutions for collecting data on water are expensive and limited in features. SyncRow, on the other hand, provides a comprehensive feature set with an intuitive interface at a lower price.

Team Conduit Nathan Eidelson, David Eng, Sherman Leung, Nisha Masharani

Conduit creates a network of electric vehicle drivers to improve the public charging experience. The Conduit app makes it easy for electric vehicle owners to communicate with each other. Drivers in need of charge can use Conduit to communicate with owners of cars currently occupying a charging station. Owners can then either grant permission remotely or come move their car in person.

Zephyr Bridge Eimon, Megan Faulk, Jason van der Merwe, Miraj Rahematpura, Austin Whittier

Zephyr is an application designed to help novice racers improve their lap times. By combining GPS information with Aerial Image Processing, Zephyr creates a 3d model of the road or racetrack. A Cross Section Analysis algorithm is applied to this model and calculates the optimal racing line around the track. Lastly, this information, along with information (such as speed and acceleration) about the racers lap at specific points in the lap is displayed visually to the user in an iOS application.

Icon Attributions

Virtual Reality Goggles by Lloyd Humphreys from the Noun Project

Flyer design and layout by Derrick Liu