David Hahn

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EDUCATION

University of California, Berkeley – College of Engineering
B.S. Electrical Engineering and Computer Science, 2017

EMPLOYMENT

Apple Inc. – Cupertino, CA Summer 2016
Software Development Intern for Human Engineering Team
- Created web-app from scratch capable of dynamically displaying user data on both mobile, desktop platforms
- Extended existing front-end libraries to create UI interactions not normally possible with base code
- Improved UI, restructured back-end models, and further developed API's to enhance UX of existing tools
- Engineered with Django, Javascript, jQuery, HTML

ServiceNow – San Francisco, CA Summer, Fall 2015
Software Development Intern for PaaS Team
- Modernized SW-upgrade monitor to provide metrics detailing progress, record changes, and node availability
- Integrated new visual features on front-end monitor page with existing back-end architecture
- Refactored unstable J-Unit tests and faulty usages of internal I18N library
- Engineered with Java, Javascript, HTML, AngularJS, MySQL

Aerospace Corporation – El Segundo, CA Summer 2014, Winter 2014 - 2015
Satellite Development Intern for AFSCN Expansion Project
- Developed a CubeSat prototype to interface with Aerospace satellite control network software
- Constructed webpage GUI to process user commands and display graphical sensor data in real-time
- Implemented back-end architecture to handle satellite control and store temperature, solar, and GPS data
- Engineered with C, Java, Python, MySQL, HTML, and JavaScript/JQuery

PROJECTS [https://ddavidhahn.github.io/]

Flocking Simulation (CS184) – C++ Spring 2017
- Implemented visually organic flocking simulation based on paper by Craig Reynolds
- Developed features to influence unit behavior including obstacles, mouse interactions, and predator units
- Tuned flock unit behavior to emulate fish and predator unit behavior to emulate sharks
- Repurposed previous project code to create responsive UI for unit tracking and analysis and user interactions

Computational Photography Project Series (CS194-26) – Python, Numpy Fall 2016
- Implemented a panorama generator capable of automatically stitching together three projective images
- Generated hybrid frequency images and blended images together using Gaussian and Laplacian stacks
- Emulated tilt-shift lens effect programmatically, making the image subjects appear miniature
- Wrote face morphing procedure via affine transforms on Delaunay triangulations
- Implemented alignment algorithm to coalesce separate B&W images for R, G, & B channels into color image

ARLISS Mars Rover Competition – Javascript Fall 2014 - 2015
- Implemented reliable parachute-release logic using GPS data that worked despite failures of other components
- Designed procedure for getting out of ditches without using infrared, sonar, and other distance sensors
- Won Berkeley 2014 Space Hackathon with curved leg design for optimal performance on uneven terrain

COURSEWORK

Computer Graphics and Imaging [CS184]
Computer Security [CS161]
Operating Systems [CS162]
Internet Architecture and Protocols [CS168]
[CS194-26] Computational Image Manipulation
[CS170] Efficient Algorithms
[CS188] Artificial Intelligence

SKILLS AND INTERESTS

Proficient with Python, C++, Java
Interests in photography, volleyball