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Josh Kelle

joshkelle.com
github.com/jkelle

Education

The University of Texas, Austin

Overall GPA: 3.91

5-Year Integrated Bachelors & Masters, Computer Science — May 2017

Technical Skills

Proficient in: Python, Java
Comfortable with: HiveQL, C
Exposure to: R, MATLAB, C++

Tools: Hadoop, Hive
NumPy, SciPy, matplotlib
Mesos

Experience

Apple Inc., Applied Machine Learning, Intern (*Cupertino, CA*) — Summer 2015

- Designed and implemented an enhanced model for product recommendations on the Apple Online Store
- Technologies: Hadoop, Hive, Python, Java

Apple Inc., iCloud Application Engineering, Intern (*Cupertino, CA*) — Summer 2014

- Designed and prototyped a cluster management system that auto-scales in response to resource demand
- Proposed new architecture for a specific application to make use of this new auto-scaling infrastructure

Applied Research Laboratories, Space & Geophysics Lab, Honors Scholar & Researcher (*Austin, TX*) — Summer 2013 – present

- Implemented and evaluated new algorithms for modeling the ionosphere
- Analyzed large amounts of GPS satellite data with an emphasis on data visualization

Projects

Content-Aware Image Resizing — Fall 2015

- Implemented an efficient algorithm to expand or shink an image without warping content
- Computes a path of pixels to add or remove by minimizing the cumulative image gradient along the path

Computer Science Educational Materials and Mentorship — Summer 2015

- Developing exercises and sample solutions to reinforce students' data structures and algorithms skills
- Meeting regularly with a student/friend to foster their growth as a computer scientist

Fifteen Puzzle Game AI — Fall 2014

- Used multiple A* searches in serial to tackle enormous state space
- Compared different search strategies and methods of dividing the search into phases

The Pacman Projects, implement fundamental Artificial Intelligence concepts — Spring 2014

- A*, minimax, expectimax search; reinforcement learning; classification; Bayesian inference
- Won first place in the Capture the Flag tournament among other honors AI students

PolyDrop, a game for the Leap Motion Controller that won first place in a hackathon competition — Spring 2014

- Players catch falling polygons and balance them on a platform controlled with their hand
- Has over 40,000 downloads on the Airspace App Store

Research

Intelligent Feature Extraction for Video Activity Classification — Fall 2014 - present

- Working with Dr. Kristen Grauman to develop a thesis in the areas of computer vision and machine learning

Selected Coursework

Graduate Autonomous Robots (*Dr. Peter Stone*) — Fall 2015
Honors Machine Learning and Vision (*Dr. Kristen Grauman*) — Fall 2015
Honors Statistics (*Dr. James Scott*) — Spring 2015
Honors Artificial Intelligence (*Dr. Kristen Grauman*) — Spring 2014

Awards

Winner of Compare Metrics/Leap Motion hackathon — 2014
Honors Scholar of College of Natural Sciences — 2013 - 2015
Honors Scholar of Cockrell School of Engineering — 2013