Josh Kelle

joshkelle.com github.com/jkelle

Education

The University of Texas, Austin

5-Year Integrated Bachelors & Masters, Computer Science Overall GPA: 3.92

May 2017

Technical Skills

Proficient in: Python, Java

Experience with: C++
Exposure to: R, MATLAB

Tools: Caffe, OpenCV

Hadoop, Cascading, Hive NumPy, Scikit-learn, matplotlib

Experience

Pinterest, Search Quality, Intern (San Francisco, CA)

Summer 2016

Improved search relevancy for male users; introduced new features and trained male-specific model Performed data analysis to identify trends and opportunity areas

Apple, Applied Machine Learning, Intern (Cupertino, CA)

Summer 2015

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

Apple, 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*) Implemented and evaluated new special smoothing algorithms for modeling the ionosphere Analyzed large amounts of GPS satellite data with an emphasis on data visualization

Summer 2013 – Spring 2015

Research

RoboCup (Robot Soccer) (Advised by Dr. Peter Stone)

Spring 2016 - present

Designed computer vision algorithm for soccer ball detection to run on low-powered SoftBank Nao robot Our team won 1st place in international exhibition competition in Beijing, China (October 2016) Our team won 2nd place in international RoboCup competition in Leipzig, Germany (July 2016) Our team won 1st place in national US Open in Brunswick, Maine (April 2016)

Intelligent Feature Extraction for Video Activity Classification (Advised by Dr. Kristen Grauman)

Fall 2014 - present

Devoloping a master's thesis in the areas of computer vision and machine learning

Projects

Personalized Image Aesthetic Prediction, a partner project to predict personalized star ratings of images

Fall 2016

I extracted visual features by fine tuning various convolutional nueral networks that were pre-trained on ImageNet (using Caffe) We trained and evaluated the model using the Aesthetics and Attributes Database (AADB) dataset.

Visual Search, given a query image, retrieves relevant frames from a video corpus Implemented bag-of-words search with visual words, including visual stop words and TF-IDF Defined the visual vocabulary by k-means clustering of SIFT descriptors

Fall 2015

The Pacman Projects, implement fundamental Artificial Intelligence concepts

A*, minimax, expectimax search; reinforcement learning; classification; Bayesian inference Won 1st place in the Capture the Flag tournament among other honors Al students

Spring 2014

PolyDrop, a game for the Leap Motion Controller that won 1st place in a hackathon competition Players catch falling polygons and balance them on a platform controlled with their hand Has over 65,000 downloads on the Airspace App Store

Spring 2014

Selected Coursework

Graduate Visual Recognition (*Dr. Kristen Grauman*)
Graduate Statistical Models for Big Data (*Dr. James Scott*)
Graduate Machine Learning (*Dr. Dana Ballard*)
Graduate Statistics and Data Science (*Dr. Chandrajit Bajaj*)
Graduate Autonomous Robots (*Dr. Peter Stone*)

Fall 2016 Fall 2016

Spring 2016

Spring 2016

Spring 2016

Fall 2015