Shotaro Ikeda

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Education

2014 - Present **University of Illinois at Urbana-Champaign**
B.S. Computer Science
GPA: 3.63 / 4.0
Graduation: May 2018

Work Experience

CS 196 June 2015 – Present
Course Assistant

- Currently writing homework assignments for students, very active role in course management such as regularly holding office hours, discussing with students about how the class can be improved, providing constant feedback to instructor about how the class should be run.
- Managed three projects, where I took an active role coming up with a roadmap to help students complete their project.
  - Snappettite, group of 7 people.
  - Project to use Logistic Regression on Images of dorm food to predict total calories.
  - iOS Mobile Application written in Swift as a front end, backend written in Python-Flask.
  - Obtained goal of having freshman non-major students getting exposure of working in a group project.
  - Interest Matcher of 8 people.
  - Facebook/Reddit like web application to match local interests between people
  - First project I was a project leader for.
  - Helped managed learning curve of AngularJS and Firebase as database.
  - SentiMiner, group of 6 people.
  - Current project and third project.
  - Had students using sentiment analysis and looking at correlation between stock prices.
  - Planning on using logistic regression to see how well we can predict stock prices given tweets live.
- Fall 2015 - Lead Artificial Intelligence Hackerspace, taught Freshman how to use the Naive Bayes Classifier to process and use the MNIST dataset.

HackIllinois August 2015 – Present
Mobile/Backend Developer

- Engaged in the "Open Hackathon" initiative, where we have written our software from stratch to have them open source. The goal is to have any organization or student body run a hackathon, taking care of the bulk of software development time, in order to have everyone focus on other aspects of hackathons such as administration, scheduling, etc.
- Currently lead developer of the official iOS Application and contributing to backend development. The iOS application is written in Swift, waiting for Apple Developer approval to begin mass testing. Current team of 2 people, where I have a designer then create the application.
- The application and backend service is to be deployed for our event, and future events onwards.
- Administered official cluehunt application in 2015. iOS version had 51 users.

Relevant Coursework

Courses Taken

CS 241 Systems Programming
CS 421 Programming Languages

Current Courses

CS 374 Algos. and Models of Computation
CS 427 Software Engineering I
CS 461 Computer Security I
CS 498SL3 Virtual Reality

Full list available on my website.

Projects

DoomAndGloom October 2016 – Present

- Solving the Doom Deathmatch problem, where we train a unsupervised model to play Doom deathmatch.
- Using a Deep-Q learning agent to solve the problem. Currently attempting to solve the issue where the reward signal is too sparse, causing our active agent to halt.

HandReader3 October 2016

- Hand digit recognition, previously done with Naive Bayes, scoring 84.3% accuracy.

- Currently 95% with regular netural network (784 Input nodes, 10 hidden nodes, 10 output nodes).

HackIllinois iOS App May 2016 – Present

- Current project for HackIllinois. Open Source, written in Swift 3.
- Features basic event features for Hackathons.

Regex Cross-Compiler September 2016

- Fun side project to cross compile Mathmatical Regular Expressions to Python Regex.
- Generates syntax tree to parse and transform into Python Regex.

LiquidActionButton June 2016

- Open source project. Material design button ported to iOS.
- Added more versatility and obtained small performance gain, about 5FPS.

Flash Me! Feburary 2015

- SpartaHack 2016 Submission.
- Created iOS application, created weighting algorithm to increase the probability of showing cards that were marked incorrect.

Languages

Comfortable	C, Swift, and Python
Previously Used	JavaScript, CSS, HTML, Clojure, Haskell, and LaTeX
Used in Classes	Java and C++

Interests

- Machine Learning, Artificial Intelligence, Backend, and Full-stack.
- Creative work, difficult, non-trival, or challenging problems.