Kevin I. Cheng

626-552-6748 kevinx1@gmail.com
cheng-kevin.github.io Python, Java, C#, SQL

EXPERIENCE

USC Robotic Embedded System Laboratory (Graduate Student) October 2018 - Present

Developed a framework to evaluate Deep Reinforcement Learning Algorithms

- Designed and developed a continuous benchmarking system that autonomously evaluates various Deep Reinforcement Learning algorithms, generates data visualizations, and deploys results to GitHub pages on a continuous basis. **(Docker, Linux, Shell, HTML/JS)**

Illumina (Software Engineer) June 2016 – August 2018

Developed a web app that provides tools to setup DNA sequencing runs, perform bioinformatics analysis, and generate reports

- Supported project through multiple release cycles: requirements gathering, front-end and back-end programming, unit testing, defect fixing, new feature development.
- Expanded API offering and developed custom
- Managed a team of two off-site contractors in a six-month effort to completely refactor a monolithic web front-end, into extensible and reusable **AngularJS** components. This refactor massively reduced future development times and defect rates.
- Appointed as technical expert for Illumina AmpliSeq Software module development, collaborated with bioinformatics scientists, product scientists, product managers, and test engineers to deliver the software to market.

Illumina (Software Test Engineer) March 2015 – June 2016

Maximized value from automation tests by developing two highly flexible test frameworks and robust continuous integration systems

- Initiated and led creation of a robust test system using **AWS** and **Teamcity** to dynamically spin up numerous test agents to concurrently test multiple software builds triggered by changes made to shared code.
- Co-architected an API Test framework with **N-Unit**/.NET, refactored a **ProtractorJS** UI test framework.
- Mentored two new grads, and together we generated over 1000 UI test cases using ProtractorJS and over 800 API tests cases.

Illumina (Laboratory Automation Engineer) August 2014 – March 2015

Programmed robotic procedure to isolate and sequence fetal DNA using Hamilton Robotics Platform

- Proficient with automated liquid handling to achieve highly precise and reproducible diagnostic results.
- Experienced with validating robotic laboratory procedures both in simulation and on real experiments.
- Worked closely with interdisciplinary team and effectively troubleshooted software, hardware, and chemistry related issues.

Prognosys Biosciences (Research Associate) June 2012 – August 2014

Developed novel multiplexed immunoassay and lead efforts to screen 1000+ human samples on the Hamilton Robotics Platform.

- Performed or oversaw all wet lab work of a novel highly multiplexed immunoassay and biomarker discovery project.
- Managed processes from obtaining raw materials to production of reagents, purifications to assay running, and data analysis to experimental design.
- Automated our proprietary assay using the Hamilton STAR Robot in a 3 month effort and confirmed human-level performance.

PROJECTS

Local Run Manager

- A flexible software that serves as the main system software for Illumina's low and mid throughput Sequencers. Local Run Manager is a framework on which various analysis applications can be installed. I served as a core contributor in a team size of 5-10 developers. **(AngularJS, ServiceStack, ASP.net**, and **PostgreSQL**)

EDUCATION

University of Southern California August 2018 - May 2020 (Anticipated)

M.S. Computer Science

University of California, San Diego September 2008 - June 2012

B.S. Bioengineering, Biotechnology