



FELIX SU

Software Development Engineer II with Focus on AI

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EDUCATION

University of California, Berkeley Aug 2014 - May 2018

B.A. Computer Science

Awards & Certificates

Certificate of Entrepreneurship & Technology (2016) , Wells Fargo
Protothon Finalist (2014), CAA Leadership Award (2014)

Relevant Coursework

CS194 - Des./Vis. Deep NNs	CS186 - Database Systems
CS162 - Operating Systems	STAT 133 - Data Computing
CS189 - Machine Learning	CS61A/B/C - Interpreting Programs, Data Structures, Computer Arch.
EECS106A - Intro to Robotics	CS70 - Discrete Math / Probability
CS188 - Artificial Intelligence	EE16A - Digital Systems
CS161 - Computer Security	MATH 54 - Linear Algebra

WORK EXPERIENCE

Amazon

Seattle, WA
Oct 2019 - Current

Software Development Engineer II - RoboticsAI

- Trained a reinforcement learning algorithm using human judgments in a Dactyl Hand robotics simulator.
- Implemented an AWS service to coordinate between our RL algorithms and an internal labeling service.
- Designed a system to label independent experiments at scale using SQS queues and Lambda services.
- Generated thousands of robotic simulations and analyzed data to check preference significance.

Amazon

Seattle, WA
Aug 2018 - Oct 2019

Software Development Engineer I - RoboticsAI

- Designed the state machine for a 18 foot, fully automated random box palletizing warehouse robot.
- Calibrated and tuned a region growing CV algorithm to locate and measure box tops from point clouds.
- Tuned a manual local search method that retrieved box placements to overcome noisy sensor readings.
- Implemented a module to plug and play ML architectures to do item location tracking for KIVA pods.

Amazon

Seattle, WA
May 2017 - Aug 2017

Software Development Engineer Intern - Robotics

- Implemented a Natural Evolution Strategy algorithm to train neural networks with parameter perturbations
- Parallelized training on a distributed EC2 system by broadcasting rewards using the MPI framework

ORGANIZATIONS AND RESEARCH

Computer Vision Researcher | **Berkeley Deep Drive**

Sep 2017 - Present

- Researched Stereo Matching by Training a Convolutional Neural Network to Compare Image Patches by Zbontar and LeCun
- Replicated Zbontar and LeCun's MC-CNN convolutional neural network, matching cost, and stereo method using PyTorch

Founder / President / Project Leader | **Launchpad**

Jan 2017 - Present

- Founded a 21-member machine learning organization to help students develop practical projects primarily involving sequential data.
- Worked with AmazonAI and AWS teams to train LSTM models on multiple speech corpora using MXNet and Deep Learning AML.
- Deployed Stella, a hands-free web browsing extension that uses AWS Lambda to access our trained model hosted on AWS S3.

CS61A/CS61B Lab Assistant | **UC Berkeley EECS Department**

Aug 2015 - Dec 2015

- Hosted lab hours to help students with Python coding concepts regarding inheritance, abstraction, and environments
- Taught best practices with Java and how to minimize runtime using sorting algorithms and complex data structures

PROJECTS

Multi-Objective Robotics - github.com/callaunchpad/MOR

Launchpad Project | May 2018

- Led an 8-person team to train an RL agent using the OpenAI NES algorithm to solve a multi-objective maze game.
- Used Covariance Matrix Adaptation to optimize the Pareto front on independent objectives, removing the need for shaped rewards.

Stella - github.com/callaunchpad/Stella

Launchpad Project | May 2017

- Built an artificially intelligent chrome extension using speech recognition APIs to browse the web with voice commands
- Working to create our own API by training LSTM and CTC networks on EC2 using the AML, Librispeech, and Modality corpora.