Timothy Shur

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WORK EXPERIENCE

Software Engineer Intern
June 2018 – Sept 2018
HeadSpin, Mobile Test Startup – Palo Alto, CA
(Python, JavaScript)
- Designed a data-rich UI to highlight user experience issues with selectable time series, issue highlights, and a network waterfall
- Developed and integrated new AI analyses for video and network data including extracting temporal data and detecting app objects
- Helped refactor the analysis pipeline to be scalable and modular with a Kafka-like streaming system to handle events in real-time

Algorithm Engineer Intern
June 2017 – Aug 2017
NIKE, Innovation Team – Beaverton, OR
(Python, MATLAB, C)
- Prototyped an SVM classifier to detect shoe gestures in real-time, an algorithm being tuned for production and submitted for a patent
- Presented to and convinced C-level executives to adopt my project

Kuehler Undergraduate Researcher
June 2016 – Sept 2016
Santa Clara University – Santa Clara, CA
(MATLAB)
- Improved bounds by orders of magnitude on the non-linear eigenvalue problem by leveraging the companion matrix
- Tested results on over 50 real-world problems to show application

Student Tutoring Director
Jan 2016 – Present
Drahmann Tutoring Center, Santa Clara University
- Lead the tutoring program and tutor upper-division math/CS

PROJECTS

ReactJS Personal Website (JavaScript)
July 2018 – Present
- Building an online portfolio with MongoDB, Express, React, Node

Distributed Neural Network (Python)
June 2018
- Implemented a multi-layer feed-forward neural network from scratch
- Designed a scalable, distributed architecture to train models quickly with many independent nodes transmitting updates over a network

Movie Recommender System (Python)
June 2018
- Predicted user ratings for unseen movies with the Netflix Prize data
- Programmed and compared variations of collaborative filtering, SVD, neural network, and ensemble algorithms to optimize accuracy

Trendy Twitter Bot @itstimshore (Python)
Apr 2018
- Generated novel Tweets on trending topics with a Markov chain language model based on ~30,000 latest relevant Tweets on the topic
- Interacted with other users to maximize popularity (170+ followers)

Quake Triage - Hackathon Finalist (Python)
Mar 2018
- Leveraged deep learning to classify earthquake building damage and rapidly alert first responders to critical disaster areas (TensorFlow)

FORMAL EDUCATION

Santa Clara University 06/2019
Majors: Computer Science and Engr. Mathematics
University Honors Program
Cumulative GPA: **3.97**

PROGRAMMING LANGUAGES
Python
JavaScript
C/C++

SKILLS
TensorFlow • Machine Learning
Data Structures • HTML/CSS • Bash
React • Angular • Node • ES6 • Git
Networks • Compilers • Cryptography

INVOLVEMENT
- **Association of Computing Machinery**
  Vice President and former Webmaster
- **Machine Learning Research Seminar**
  Weekly seminar on cutting edge research
- **Math and CS Society**
  Vice President of Mathematics
- **Pi Mu Epsilon Math Honors Society**
  Board Member
- **Tau Beta Pi Engr. Honors Society**
- **JumpStart Campus Ambassador**

AWARDS
- **1st in Nike Digital Intern Hackathon**
  AR app to augment in-store retail experiences
- **2nd in SCU BroncoHack Hackathon**
  Mental self-care with IBM Watson and EEG
- **1st at SCU in Putnam Math Exam (x2)**
  Scored 22 and 11, placing in the top 15% in N.A.
- **Kuehler Summer Research Grant**
  Highly competitive research fund (6 students)
- **KEEN "Creating Value" Poster Award**
  Kuehler research presented at SCU showcase
- **Provost's Scholarship**
  Santa Clara University merit scholarship
- **Presidential Scholarship**
  Award given to outstanding seniors at SCU
- **Dean's List**
  Cumulative GPA in top 10% at SCU, 2015-2018