Matthew Tang

matthewtang@berkeley.edu
(949) 431-3164
matthew29tang.github.io

Education

University of California, Berkeley **2018 – 2022**

B.S. Electrical Engineering and Computer Science (EECS) | **GPA 3.93**

Regents' and Chancellor's Scholar (top 2%), Edward E. Kraft Award (Freshman 4.0 GPA)

Organizations: Eta Kappa Nu Honors Society, Regents/Chancellor's Scholars Assoc

Relevant Coursework (* Spring 2021)

[CS170] Efficient Algorithms	[CS61B] Data Structures & Algorithms	[EECS126] Probability & Random Processes
[CS188] Artificial Intelligence	[CS160] UI Design & Development	[IEOR 135] Data Sci for Venture Applications
[CS186] Database Systems	[CS61C] Computer Architecture	[EECS127] Optimization Models
[CS189] Machine Learning*	[CS161] Computer Security*	[CS70] Discrete Math & Probability

Experience

Software Developer Engineer Intern | Amazon, Bay Area, CA **2021**

- Incoming software developer engineer intern for Amazon, Summer 2021

Software Engineer Intern | Capital One, San Francisco, CA **2020**

- Developed a processor (PySpark) to intelligently identify datasets in AWS S3 (>1B files)
- Designed a novel algorithm using cosine similarity clustering & heuristics (1.6x improvement)

Fullstack Engineer | Computational Approaches to Human Learning Lab **2020 – Present**

- Develop an Intelligent Tutoring System with Bayesian Knowledge Tracing (ReactJS, Firebase)
- System to be deployed for 100+ inmates under HopeAI (prison inmate education system)

Academic Intern | Data Structures (UC Berkeley CS61B) **2020**

- Assist 20+ students in lab section (one-on-one) with software development projects

Summer Undergraduate Researcher | USC Viterbi Interaction Lab **2019**

- Developed a novel model & action selector for estimation of human beliefs and robotic actions to correct them using reinforcement learning for dynamic environments with uncertainty.

Projects

FuSSI-Net – Volvo Cars / Data-X **2020**

- A novel pedestrian intent prediction network using early fusion of skeletal fitting to a framework of object detection (YOLO), association (SORT), and classification (DenseNet)
- Back-end: Python (TensorFlow), Team size: Six (UC Berkeley) & Six (Chalmers, Sweden)

LangID **2019**

- Recurrent neural network (RNN) to classify the language of a word
- Back-end: Python (CS188 machine learning modules), Team size: One

Universal Subtitler – Cal Hacks (Best Use of Google Cloud API 3rd out of 110 teams) **2019**

- Generate subtitles in any language for videos using Google Speech to Text & Translate API
- Back-end: JavaScript, Frontend: JavaScript (Chrome Extension), Team size: Four

Leadership

Technology Director | Health{hacks} **2020 – Present**

- Hosted a virtual healthcare innovation event to solve global health problems (250+ attendees)

Executive Director | Golden Gate Science Olympiad **2018 – Present**

- Lead 15-member board in weekly meetings to obtain sponsorship, manage funds and reserve rooms for annual 23 event Science Olympiad invitational for 1000+ high school students.

Publications

- Francesco Piccoli, Rajarathnam Balakrishnan, Maria Jesus Perez, Moraldeepsingh Sachdeo, Carlos Nunez, **Matthew Tang**, Kajsa Andreasson, Kalle Bjurek, Ria Dass Raj, Ebba Davidsson, Colin Eriksson, Victor Hagman, Jonas Sjoberg, Ying Li , L. Srikar Muppirisetty, Sohini Roychowdhury, "*FuSSI-Net: Fusion of Spatio-temporal Skeletons for Intention Prediction*". IEEE Asilomar SSC (Applications of Deep Learning I) **2020**
- Matthew Rueben, Eitan Rothberg, **Matthew Tang,** and Maja Mataric**,** "Estimating and Influencing User Mental Models of a Robot's Perceptual Capabilities: Initial Development and Pilot Study." In Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (Cambridge, UK) **2020**

Skills

Python, Java, JavaScript, React, C, SQL, Firebase, PySpark, S3, EMR, ROS, Flask, LaTeX, Git