Kevin Shao

305 Memorial Dr. Cambridge, Massachusetts 02139 kshao23@mit.edu (818) 836-2453

6645 Daryn Dr. West Hills, CA 91307

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA

• Major: Candidate for Bachelor of Science in Computer Science

GPA: **4.8**/5.0

Expected Graduation: June 2023

• Relevant Coursework: Software Construction, Analysis of Algorithms, Machine Learning, Linear Optimization, Autonomous Racecar Robotics

RELEVANT EXPERIENCE

MIT 6.046 (Design and Analysis of Algorithms) - Grader

February 2021 - Present

- Grade problem sets for ~20 student per week for MIT 6.046
- Achieved A+ grade in the class as a student

MIT 6.036 (Machine Learning) - Lab Assistant

February 2021 - Present

- Host weekly 2-hour office hours to answer homework and content questions
- Run weekly 2-hour lab along with TA of 12-14 student sections

MIT HAN Lab - Undergraduate Researcher

November 2020 - Present

- Investigate improvements to 3D Segmentation models via specialized loss functions and training schedules
 - o Achieved ~67% mIoU on baseline Semantic KITTI dataset
- Refactor 3D Object Detection codebase, adding support for recent Nuscenes dataset
- Implementing Neural Architecture Search on the codebase, aiming to support inference in hardwareconstrained settings

doc.ai - Software Development Intern

January 2021

- Develop parsing algorithm for clinical trial PDF's
- Construct "gold-standard" schema for observational clinical studies
- Implement web application to integrate 3 teams' work coherently

Google - STEP Intern (Virtual)

June - September 2020

- Designed and implemented a web application to facilitate communication on college campuses using HTML, CSS, JavaScript, and Java
- Integrated with 5 Google API's, including Calendar and Gmail
- Executed full project lifecycle, including design review, UX review, and user feedback

Daiwa Steel Tube Industries - Software Development Intern

January 2020, February - March 2021

- Developed software in Java to automatically generate reports from speech data
- Curated voice data to improve voice recognition model, accounting for Japanese factory jargon
- Achieved ~90% accuracy on prototype model
- Integrate automated alert system with Text-to-Speech tools and audio software for automatic audio alerts

EXTRACURRICULAR ACTIVITIES

MIT Varsity Lightweight Crew

Fall 2019 - Present

- Member of MIT's Varsity Lightweight Crew Team
- Practice and compete for 15+ hours per week

MIT Driverless - Controls Engineer

November 2020 – Present

- Formulate control problem as a Nonlinear Model Predictive Control (NMPC)
- Implement NMPC code in C++ for optimum latency
- Integrate with existing control stack with robust switching logic

SKILLS AND INTERESTS

Skills: Java, Python, PyTorch, Django, React.JS, PHP, JavaScript, MySQL, Git

Interests: Poker, Chess, Music Composition, Swimming, Cycling