Kevin Shao

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EDUCATION

Massachusetts Institute of Technology, Cambridge, MA — Expected Graduation: **June 2023**

- **Major**: Candidate for Bachelor of Science in Computer Science — GPA: **4.8**/5.0
- **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
  - 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 hardware-constrained 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