GEORGE CHEN

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229 Vassar Street, Cambridge, MA 02139

EDUCATION

Massachusetts Institute of Technology **Cambridge, MA**
Candidate for B.S. in Mechanical Engineering, Minor in Computer Science | GPA: 4.8/5.0 ***May 2021***
Relevant Coursework: Robotic Manipulation, Advanced Dynamics and Control, Analysis and Design of Feedback Control Systems, Introduction to Robotics, Signals and Systems, Artificial Intelligence, Introduction to Algorithms, Numerical Computation, Introduction to Machine Learning, Electronics for Mechanical Systems

EXPERIENCE

Waymo (formerly Google's Self-Driving Car Project) **Mountain View, CA**
Systems Engineering Intern, Fault Protection ***May 2020 - Aug 2020***
- Designed and implemented a software tool in Python, incorporating Cameo Systems Modeler and open-source packages, to streamline the process of system representation and fault tree analysis
- Quantitatively analyzed root causes of faults in an autonomous system and their mappings to system-level outcomes and metrics, using Boolean logic and probabilistic models

Dexai Robotics **Somerville, MA**
Robotics Engineer Extern ***Jan 2020 – Feb 2020***
- Developed and tested an API that interfaces between Python and C++ using open-source packages
- Established framework for reinforcement learning training in the OpenAI Gym environment
- Wrote CMake scripts to compile and link to existing dependencies in codebase

Aerospace Controls Laboratory **Cambridge, MA**
Robotics Research Assistant ***Sept 2019 – Dec 2019***
- Analyzed the kinematic tree of a self-balancing Segway robot
- Developed a URDF model in ROS and a working simulation in the Gazebo environment

Daimler Trucks North America, LLC **Portland, OR**
Product Validation Engineering Intern, Vehicle Dynamics ***Jun 2019 – Aug 2019***
- Designed and iteratively prototyped a distributed IMU sensor system to measure articulation angle of instrumentation tractor-trailer trucks in Arduino
- Tested and evaluated performance of the sensor system in MATLAB, optimized its accuracy via sensor fusion with GPS using Kalman Filter, designed interface PCB layout to read and write CAN messages
- Validated ADAS camera systems by processing recorded videos using computer vision in Python (OpenCV)

MIT Space Systems Laboratory & Lincoln Laboratory: WaferSat **Cambridge, MA**
Research Assistant, Thermal Engineering Team ***Jan 2018 – Aug 2018***
- Developed and optimized PID control algorithm in Python and C++ for a WaferSat prototype to maintain steady-state temperature with 40% less power output
- Characterized thermal behaviors of the nanosatellite prototype in space-like environment in Thermal Desktop
- Conducted tests in thermal vacuum chamber, analyzed temperature signals using MATLAB and correlated with analytical Thermal Desktop model

SKILLS

Programming: Python, C++, MATLAB, HTML, CSS
Software: ROS, Linux, Git, Solidworks, AutoCAD, Thermal Desktop, Arduino, Raspberry Pi, Microsoft Office
Hardware: bandsaw, drill press, CNC mill & lathe, hand & power tools, 3D printing, laser cutting, soldering, PCB design
Languages: Fluent in English, Mandarin Chinese, and Cantonese