Tommy Seng Heng

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EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA - *Expected 2022*

B.S. Electrical Engineering and Computer Science, 4.9 / 5.0 GPA

Relevant Coursework

- Technical Oral Communication
- Advanced Algorithms
- Computational Structures
- Software Engineering I
- Frontend Software Studio
- Advanced Natural Language Processing
- Embedded Systems
- MIT Web.Lab
- Signal Processing
- Engineering Interactive Technologies
- Computer Systems Engineering
- Linear Algebra

EXPERIENCE

Engineering Researcher - **MIT App Inventor,** Cambridge, MA and São Paulo, Brazil

September 2018 - Present

- Design a Conversational AI Interface for the visual programming platform MIT App Inventor, enabling students to develop apps for conversational agents like Amazon Alexa and Google Home
- Lead week-long workshops twice a semester teaching 20+ local high school students computational thinking and conversational AI concepts
- Delivered a presentation of my Conversational AI Interface as an upcoming App Inventor feature at the 10th Annual MIT App Inventor Summit
- Trained and hosted a text-generating LSTM neural network with Tensorflow on a node.js web server
- Automated the encoding of block-based code into Javascript and hosting this Javascript on AWS Lambda
- Developed and pioneered a new curriculum for an abroad education initiative in Brazil, training educators in computational thinking

Software Engineer Intern - **Bbot, Inc.,** Lexington, MA

June 2021 - August 2021

- Redesigned web pages facilitating customer financial transactions in a React Native framework for a fast-paced in-venue ordering start-up; successfully pushed to production
- Developed a comprehensive front-end test suite with Cypress.io for performance-critical web pages
- Incorporated customer feedback into product features to improve user experience

Computer Science Teaching Assistant - **Breakthrough Computer Science Academy,** San Jose, CA

June 2018

- Coached high school students on video game development in Unity
- Tracked student outcome data and compiled reports for the on-site administrative team

Engineering Researcher - **Autonomous Systems Lab,** Stanford University

June 2017 - July 2017

- Developed a time series forecasting model using an LSTM neural network for use in autonomous mobility simulations
- Defined a custom loss function which heavily penalized over-estimation to optimize model performance
- Implemented Dropout as a method of determining a probability distribution of the model's predictions

SKILLS

Proficient in Python, JavaScript, Node.js, React, Web-Design, HTML, CSS, Object-Oriented Programming

Experienced with AWS, Tensorflow, SQL, Github, Java, GWT, C/C++, RESTful API Design, UNIX Environments