STEPHEN E. OTREMBA Jr.

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EDUCATION

Massachusetts Institute of Technology – Cambridge, MA — Expected June 2021
Candidate for B.S. in Computer Science & Engineering; Minor in Mathematics — *4.6/5.0 GPA*

- **Relevant Coursework:** Software Construction, Design & Analysis of Algorithms, Modeling with Machine Learning, Computer Systems Engineering, Interconnected Embedded Systems, Discrete Mathematics, Probability & Random Variables, Linear Algebra

WORK EXPERIENCE

Google | Client Side Identity – Sunnyvale, CA — May 2020 – Present
Software Engineering Intern

- Modify an open-source server library used by web developers to integrate Google Sign-In into existing websites
- Refactor library methods through elimination of unrelated and outdated code and abstraction of complicated sub-routines
- Produce documentation and mock websites to demonstrate proper integration and use of the code library

Outage, LLC | Player Projections – Boston, MA — August 2019 – Present
Quantitative Analyst

- Contribute to a suite of information services for professional baseball players started by MLB pitcher Trevor Bauer
- Model starting pitcher salaries for future seasons using machine learning techniques and historical contract data
- Identify methods to assist MLB agents in maximizing the value of their clients in open-market contract negotiations

Walmart eCommerce | Jet.com – Hoboken, NJ — June 2019 – August 2019
Software Engineering Intern

- Collaborated with Senior Project Managers to develop the system designs for Walmart's next-generation fulfillment centers
- Created simulation modules in Python capable of modeling fulfillment center systems for design analysis and data collection
- Developed a cost effective and customizable alternative to the simulation solutions currently used for system analysis

Raytheon | Integrated Defense Systems – Woburn, MA — May 2018 – August 2018
Software Integration and Validation Test Intern

- Maintained and utilized MATLAB scripts for the analysis of radar data retrieved from software integration tests
- Engineered a script to streamline the data analysis process by queuing tests to be run on the desired datasets

PROJECT EXPERIENCE

Real-Time Embedded Pictionary System — April 2020 – May 2020
Interconnected Embedded Systems Final Project

- Configured an ESP32 microcontroller to play a remote variant of Pictionary with other microcontroller systems
- Designed a data flow scheme allowing clients to send and receive game information by communicating through a central server

Competitive Crossword Puzzle Game — April 2019 – May 2019
Elements of Software Construction Final Project

- Programmed client-server software implementing a competitive multiplayer crossword puzzle with an interactive UI
- Enabled the game server to handle an arbitrary number of head-to-head games concurrently

Virtual Reality Driving Simulation — January 2018
MIT Momentum Competition – Best Project Implementation

- Developed a hazardous driving simulator using C#script and the Unity 3D development platform
- Linked Windows Mixed Reality headset and controllers to the project to replicate the driving experience

Earth-Imaging Telescope Satellite — September 2017 – May 2018
MIT Space Systems Lab

- Assisted in the design and testing of a cube satellite equipped with a novel and inexpensive strip-aperture space telescope
- Constructed and calibrated a testbed to evaluate attitude control systems on a large scale prototype of the system

LEADERSHIP

MIT Pokerbots – Boston, MA — April 2019 – Present
Head Instructor, Past: Treasurer

- Organize a coding competition in which participants learn machine learning topics to create a bot capable of playing poker
- Campaign for over $70,000 in company sponsorships and manage club expenses for teaching materials and student prizes

Phi Kappa Theta Fraternity – Boston, MA — September 2017 – Present
President, Past: Vice President, Risk Manager

- Manage executive members and serve as a liaison between fraternity members, MIT administration, and the City of Boston
- Participate in community service and charity work in the Back Bay neighborhood through outreach programs

SKILLS AND INTERESTS

- **Technical**: Python (NumPy, Pandas, Keras, Scikit-learn, SimPy), Java, C++, Git
- **Interpersonal**: Public Speaking, Leadership, Collaboration, Teaching
- **Personal Interests**: Running and Fitness, Cooking, Los Angeles Dodgers, Sports Analytics