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

Walmart eCommerce | Jet.com – *Hoboken, NJ* *June 2019 – August 2019*

Software Engineering Intern – Fulfillment Engineering Team

- Worked with the engineering team developing 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 an inexpensive 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

- Developed and utilized MATLAB scripts for the analysis of radar data retrieved from software integration tests
- Evaluated testing results to determine if the integration of missile defense radar software was nominal
- Created a script to streamline the data analysis process by queuing tests to be run on the desired datasets

PROJECT EXPERIENCE

Baseball Free Agent Valuation Model *August 2019 – Present*

Sabermetric Quantitative Analysis

- Contribute to a suite of information services for professional baseball players started by MLB pitcher Trevor Bauer
- Work to develop a model to value players entering free agency and project salary for upcoming seasons
- Utilize regression methods, K-Nearest Neighbors, and dimensionality reduction techniques for player analysis

Hazard *January 2018*

Virtual Reality Driving Simulator

- Developed an educational application for virtual reality using a 3D platform developing software
- Coded movable, 3D objects in a hazardous driving simulator using C# script and the Unity development platform
- Linked Windows Mixed Reality headset and controllers to the project to replicate the driving experience

MIT Space Systems Laboratory REIF SAT *September 2017 – May 2018*

Earth Imaging Telescope

- Assisted in the design and testing of a cube satellite equipped with a cost efficient strip aperture space telescope
- Developed and assembled a testbed to evaluate attitude control system on a large scale prototype of the model
- Conducted coarse balancing of the testbed on a low friction air-bearing in preparation for dynamic testing

LEADERSHIP

MIT Pokerbots – *Boston, MA* *April 2019 – Present*

Treasurer

- Organize a yearly coding competition where participants create a bot capable of playing a variant of poker as an elected official
- Campaign for over $70,000 in company sponsorships and manage club expenses for teaching materials and student prizes
- Compile lecture notes and materials for programming, machine learning topics, and poker theory covered in the course

Phi Kappa Theta Fraternity – *Boston, MA* *September 2017 – Present*

President; Vice President (2019); Risk Manager (2018)

- Manage executive members and lead weekly meetings to discuss decisions that impact the fraternal organization
- Participate in community service and charity work in the Back Bay neighborhood through fraternal outreach
- Serve as a liaison between the governing bodies of MIT, the members of the fraternity, and the City of Boston

SKILLS AND INTERESTS

- **Technical**: Python (NumPy, Keras, Scikit-learn, SimPy), Java, Git
- **Interpersonal**: Public Speaking, Leadership, Collaboration, Teaching
- **Personal Interests**: Running and Fitness, Los Angeles Dodgers baseball club, Sabermetric Analysis