
Kyle B Thompson

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EDUCATION

Massachusetts Institute of Technology

Cambridge, MA

Candidate for Bachelor of Science in Mechanical Engineering

2019-2023

Minor in Design and Concentration in Economics

GPA:4.7/5.0

- Relevant Coursework: State-Space Control; Design & Manufacturing I: Autonomous Machines; Thermal-Fluids Engineering I & II; Mechanics & Materials; Fundamentals of Programming; Dynamics I & II; Computational Thinking & Data Science; Numerical Computation in MATLAB; Engineering Systems Design
- Relevant Course Projects: *Active Gimbal Control*; *Small Radar System (SAR and Doppler)*; *Magnetic Levitation: Electromagnetic Control*; *2WD 2.s007 Robot*

WORK EXPERIENCE

MIT Dynamics and Controls II

Cambridge, MA

Lab Assistant and Grader

January 2022-Present

- Aid MIT's Dynamics and Controls II lab professors in prepping materials and set ups for lab, assist students with completion of objectives, and help grade assessments

Jaros Baum & Bolles

New York, NY

Engineering Intern

June 2021-July 2021

- Evaluated thermal loads for various space states, calculated pressure drops in proposed systems, and developed an in-house calculator to evaluate building infiltration

PROJECTS

Self-Balancing Robot Control

Cambridge, MA

MIT Dynamics and Controls

September-December 2021

- Developed stabilization feedback control for self-balancing Segway for long term stability and path following with PD, PID, and State Space controllers

Autonomous Underwater Vehicle

Cambridge, MA

MIT Engineering Systems Design

September-December 2021

- Redesigned and manufactured weight-shifting mechanism of AUV for pitch and roll control
- Purchasing Lead: purchased and organized supply logistics, coordinated with outside manufacturers

Built an Operational Nuclear Fusor

Cambridge, MA

MIT NSE

January-February 2020

- Using the resources and tools provided by MIT, I was able to construct a working Farnsworth Fusor and operate it in the presence of Deuterium once under vacuum

MIT PokerBots

Cambridge, MA

Top 20 Finalist and Top 10 Freshmen Teams

January-February 2020

- A computerized poker tournament in which teams program a completely autonomous pokerbot to compete against other teams in one month; with the challenge of a random permutation of card values
- Utilized Baye's Theorem to generate a more consistent list of valid permutations after showdown

SKILLS

Programming: *MATLAB; Python; ARDUINO; Git; Simulink and Simscape; Image Processing; ROS*
Design and Fabrication: *CAD Experience; Solid Works; CNC Mill; CNC Lathe; Waterjet; 3D Printing*

LEADERHIP

- Engineering Systems Design Purchase Lead; Dormitory Chair; Social Chair at Sigma Alpha Epsilon