John Eastman

703-599-7163 ● jackeastman00@gmail.com ● eastmanj.com ● linkedin.com/in/eastmanj/

EDUCATION

Massachusetts Institute of Technology **Cambridge, MA**
Bachelor of Science in Computer Science and Engineering, Minor in Japanese Sept. 2019 – May 2023
- Minor in Japanese GPA: 4.7/5.0
- Notable Courses: Shape Analysis, Computational Design and Fabrication, Computer Graphics, Advances in Computer Vision, Adv. Computational Photography, Design and Analysis of Algorithms, Operating System Engineering, Computer Systems Engineering, Software Construction, Machine Learning.

EXPERIENCE

MIT Computer Science and Artificial Intelligence Laboratory **Cambridge, MA**
Undergraduate Researcher - Computational Design and Fabrication Group Feb. 2023 – Present
- Collaborating with a multidisciplinary team to develop a rigid body physics simulation for underwater gliders.
- Adapting and enhancing Google's differentiable open-source physics simulator “Brax” to accommodate hydrodynamic forces for more accurate simulations.
- Implementing precise prismatic joint connections and dynamic mass changes.
- Assisting the design team in developing physical prototypes by providing data-driven physics simulations.

MIT Electrical Engineering and Computer Science Dept. **Cambridge, MA**
Undergraduate Teaching Assistant Sept. 2022 – Dec. 2022
- Served as a TA for the Advanced Undergraduate Subject: Computer Graphics (6.4400).
- Conducted weekly office hours, addressed student queries on Piazza, and provided academic support.
- Composed and graded exam questions, as well as evaluated homework assignments.

Intel Corporation **Remote**
3D Acceleration Intern May 2022 – Aug. 2022
- Developed discrete GPU driver updates to resolve bugs and enhance Direct3D performance for Windows.
- Performed in-depth GPU performance profiling and analysis utilizing advanced analysis tools.
- Engaged with modern DirectX9, DirectX11, and DirectX12 3D titles in Windows.
- Provided technical support to developers using GPU systems for performance analysis.

MIT Mechanical Engineering Dept. **Remote**
Undergraduate Researcher - Backend Server Development June 2021 – Sept. 2021
- Collaborated with MindHandHeart to develop a website hosting therapeutic audio files for mental health support.
- Established a server backend using Python in Django, hosted by Nginx on an Ubuntu server.
- Designed a custom log-on system with use, content creator, moderator, and server administrator roles.

MIT Choi Labs **Remote**
Undergraduate Researcher - Embedded Systems Designer June 2021 – Sept. 2021
- Adapted open-source embedded mouse feeder systems for remote monitoring capabilities.
- Engineered new hardware to interface offline mouse feeder using Raspberry Pi for internet connectivity.
- Developed software for Raspberry Pi to monitor the mouse feeders and transmit data and alerts autonomously.

Andeno **Remote**
Data Science Intern June 2020 – Aug. 2020
- Developed Python command-line scripts to process raw bank statement data and perform data analysis.
- Categorized transactions into groups using Natural Language Processing techniques.
- Verified users' income, expenses, spending, and credit history and generated customer analysis and statistics.

SKILLS

Programming Languages: C/C++, Python, C#, Java, Julia, MATLAB
Frameworks: Direct3D (DirectX), OpenGL, PyTorch, UNIX, Unity, Arduino, ESP32, Nginx, Django
Proficiencies: Computer Graphics, Computer Vision, Machine Learning, Operating Systems, Embedded Systems