ALEXANDER ARCASOY

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Portfolio: www.alexarcasoy.com | **GitHub:** www.github.com/arcasoy

Work Experience

Advent Technologies   **February 2022 - Present**

Automation Engineer

- Programmed robotic automation cell with SPEL+ language for manufacturing of hydrogen fuel cell components
- Utilized computer vision to locate components to 30 micron precision for coordinate shifts and processing
- Implemented heap sort algorithm to create a priority queue message protocol between two ethernet controlled devices
- Designed web feeding tension control fixture, two chamber vacuum chuck, and other machinery for process improvement

Blackstone Valley Engineering, Marlborough, MA   **January 2021 – August 2021**

Automation Controls & Electrical Engineering Co-op

- Led controls development for two healthcare based industrial automated test stands to increase throughput by a factor of 10+
- Developed PLC and HMI software on Allen-Bradley/PanelView Plus and Trio/Weintek hardware and wired two control panels
- Produced programs for two interacting 6-axis FANUC robots to prove the feasibility of an automated manufacturing process
- Managed the workload of two contractors and served as the customer liaison for project deliverables, deviations, and timeline

Hydrow, Cambridge, MA   **January 2020 – July 2020**

Hardware and Mechanical Engineering Co-Op

- Performed root-cause analysis (8D) and redesigned foot stretcher subassembly to reduce maximum stress by a factor of 2.74 after learning SolidWorks FEA simulations to perform iterative design study
- Coordinated quality initiatives for proper GD&T design documentation and process improvements with foreign manufacturers
- Conducted user testing to inform two design iterations on a support fixture to mitigate a predicted failure mode

Fresenius Medical Care, Lawrence, MA   **January 2019 – June 2019**

R&D Test and Systems Engineering Co-Op

- Planned and performed tests on unreleased dialysis machine to validate design and provide feedback to multidisciplinary team
- Developed JavaScript test scripts with data acquisition and fault recognition features for 584-day reliability test

Projects

Portfolio Website GitHub | Portfolio   **September 2022**

- Deployed full-stack build of portfolio using React, AWS Amplify, API Gateway, Lambda, & SES, Git
- Managed version control and issue tracking through GitHub and main, develop and feature branches

SocialTracker GitHub | Portfolio   **May 2020**

- Created Discord bot hosted on GCP to store users' social media follower data and return visualizations by implementing Node.js, REST APIs, and SQL with ten servers using it at peak

Education

Northeastern University, Boston, MA   **December 2021**

B.S. in Mechanical Engineering and M.S. in Engineering Management   **GPA:** 3.705

Skills

- **Programming:** JavaScript, Git, SQL, Ladder Logic, Python, C++
- **Applications:** Certified SolidWorks Professional (CSWP), Fusion 360, MATLAB, FANUC, Allen-Bradley, VSCode

Hobbies & Interests

- **Hobbies:** Community Rowing Inc., Cycling, Travel, Snowboarding, Hiking, Windsurfing
- **Community Service:** Eagle Scout project, Head of the Charles, Boston Marathon