Uygur Tepe

(313) 908-3913 | uygurtepe@protonmail.com | Huntington Woods, MI
LinkedIn: @uygurTepe | GitHub: @utepe | Portfolio: utepe.github.io

Education

University of Windsor Sept. 2018 – Aug. 2023
BASc in Electrical Engineering Coop, Minor in Computer Science & Mathematics *Windsor, ON*

- **GPA**: 94%
- DAAD RISE Scholarship, In-Course Scholarship (2021), President's Honor Roll, Dean's List (2018-2023)
- **Relevant Coursework**: Embedded System Design, Obj-Oriented Software Analysis/Design
- **Publication**: "Novel Hardware-in-the-loop Approach for thermal systems", EuroSun Conference (2022)

Experience

DevOps Engineer Intern Jan. 2022 – Dec. 2022
Royal Bank of Canada (RBC) *Toronto, ON*

- Created and maintained a set of web services that expose internal infrastructure and security endpoints for automation and informational transparency
- Automated infrastructure services using the service-to-worker design pattern to improve the provisioning and filtering of certificates, reducing manual authorizations by 50%
- Developed 50+ unit, smoke, and functional tests, which were included as quality gates in the Jenkins pipelines to move 10 different internal applications to no-touch production deployments
- **Utilized**: Java, Spring (SpringBoot), Spock, Postman, Jenkins, Git, OpenShift

Hardware-in-the-Loop (HIL) Research Intern Sept. 2021 – April 2023
Technische Hochschule Ingolstadt *Ingolstadt, Germany (Remote)*

- Designed a HIL environment that allows MATLAB/Simulink models to properly communicate with a physical testbench via LabVIEW without a PLC, allowing easy transfer of data, reducing the setup and tools needed for a HIL environment
- Published a conference paper containing setup, models and results of the HIL environment to create a replicable environment for future applications, and presented at EuroSun 2022 Conference
- **Utilized**: MATLAB, Simulink, LabVIEW, Carnot Toolbox, Git

Application Development Intern May 2021 – Aug. 2021
Open Systems Technologies *Detroit, MI*

- Contracted to the Midmark Corporation to work on their Real-Time Locating System (Midmark RTLS), improving experience of healthcare professionals and patients by providing real-time location tracking of medical equipment
- Coordinated with stakeholders and UX designers to design and integrate over 20 reusable React UI components to improve the user experience of the application
- Improved status updates of tracked assets in the application by implementing a WebSocket connection to the backend to allow for real-time updates of asset battery levels
- **Utilized**: Typescript, React, Redux, MaterialUI, C#, ASP.NET, SQL, Visual Studio, Git, Azure DevOps, Azure

API Developer Intern Sept. 2020 – Dec. 2020
SMSAMI *Toronto, ON (Remote)*

- Architected, and created serverless microservices using AWS which are able to scale and handle hundreds of web requests at once, minimizing delay when running event-based applications
- Leveraged Application Load Balancers to trigger AWS Lambda functions written in Node.js using REST API to save various data models in DynamoDB to make website function quicker by distributing web traffic
- Utilized design patterns and wrappers (such as Database per Server and API Gateway) to improve scalability and reduce complexity of the application
- **Utilized**: Typescript (Node.js), REST APIs, AWS (Lambda, DynamoDB), Dynamoose, NoSQL Workbench

Projects

Wearable Biomimetic Appendage (WBA) | *Python, C#, Unity, EAGLE, Fusion360* Jan. 2023 – Aug. 2023

- Constructed a wearable robotic hand that can mimic users finger movements using a control glove with collaborating with two other team members to meet deadlines and deliverables
- Created a control glove using Hall effect sensors and the RaspberryPi Pico to track finger movements using a robust three-step calibration algorithm
- Developed a virtual environment with a hand model in Unity to interface with the control glove and emulate the users hand movements in a virtual reality setting
- Programmed a socket-based communication interface between the Pico and Unity that allowed for cycling between different modes of the WBA
- Demo Video

Technical Skills

Languages: C#, Java, Python, Typescript/Javascript, C/C++, VDHL
Engineering Tools: MATLAB/Simulink, Unity, RaspberryPi, Arduino, LabVIEW, LTSpice, FPGA, ModelSim
Frameworks: React, Express, Mongoose, ASP.NET, SpringBoot, AWS-SDK, MaterialUI
Developer Tools: Git, Postman, Docker, AWS, Jenkins, Azure, VS Code, Visual Studio, IntelliJ
Libraries: SciPy, pandas, NumPy, Matplotlib, Machine (MicroPython)