Oyku Uzun

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SKILLS

Languages: Python, C++, JavaScript, HTML, CSS, VHDL, PowerShell

Tools: Arduino, Raspberry Pi, FPGA, Git, GitHub, JIRA, Figma, AutoCAD, SolidWorks

Frameworks/Libraries: Node.js, OpenCV, TensorFlow, Pandas, Pytorch, BoTorch, Scikit-Learn

EDUCATION

BASc., Computer Engineering, *University of Waterloo* — May 2022 – May 2026, Waterloo, ON

Canadian & Waterloo Engineering Competition Director, Cohort Academic Representative, UW Energy Network Club High School Outreach Program Coordinator, Engineering Society Finance Director

EXPERIENCE

Laboratory Automation Engineer, *National Research Council* — Sep 2022 – present, Mississauga, ON

- Developed APIs in **Python** for the automation of the instruments (potentiostats, Gas Chromatograph, flowmeters, microscopic cameras, various pumps etc.) in order to integrate them into the workflow
- Used electrochemical knowledge to **optimize the design** of the automated platform used to **accelerate materials discovery** for Carbon Capture
- Performed data analysis using the **Numpy** and **Pandas** libraries to assess the performance of the setup
- Developed an algorithm to perform statistical analysis on images of the samples using **OpenCV**

Technical Analyst, *Definity Financial Corporation* — Jan 2022 – Apr 2022, Waterloo, ON

- Resolved **260+ tickets;** built **over 100 machines** including virtual machines; ensured proper software and credential deployment for an efficient work environment
- **Multi-tasked and prioritized** in order to meet tight internal deadlines
- Practiced technical agility by **quickly adapting to new methods** in order to take part in company-wide projects

Undergraduate Research Assisstant, *Hacettepe University* — May 2021 – Aug 2021, Ankara, Turkey

- Assisted multiple research projects on biofuel production by **creating academic summaries** of literature and **performing data analysis**
- **Marked 150+ final exams and midterms** for various courses

PROJECTS

Magic Glove, *Raspberry Pi, Python* — Jul 2022

- Used Raspberry Pi, multiple sensors, and Python to build an assistive device for the visually impaired
- Implemented functionality to communicate with the user using GCP text-to-speech; used **OpenCV** to detect color

Carbon Detector, *Feather Microcontroller, Python* — Dec 2021

- Quantified the CO2 present in ambient air using a **Feather microcontroller** and **Python** with high accuracy to explore the most optimal conditions for CO2 removal

WasteMeter App, *Figma, OpenCV* — May 2022

- Co-designed an app to **motivate users to reduce their environmental impact** by detecting food waste using **computer vision**
- Performed **target market analysis** to tailor the product for university students

Phase Change Detector, *Arduino UNO R3, Python* — May 2021

- Designed a series of experiments to measure the cryoscopic constant of water
- Programmed an **Arduino UNO R3** to measure the temperature changes using an **RTD**
- **Analyzed the data plots generated** to determine the material properties