EMRE BENGU

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WORK EXPERIENCE

Software Developer   September 2023 – August 2024
Department of National Defence, Ottawa, ON

- Led the migration of mapping systems from Microsoft Visio to Qualiware using DNDAF Framework standards, improving data accuracy and operational efficiency. Built a survey application with JavaScript frontend and database backend, integrating data from multiple Excel sources and storing respondent data

Business Analyst   May 2022 – April 2023
Statistics Canada, Ottawa, ON

- Developed business intelligence solutions using PowerBI and PowerApps to streamline product analysis workflows. Created interactive dashboards with drill-down capabilities for detailed data examination across multiple Excel data sources. Designed business process models and UML diagrams using Sparx Enterprise Architect

TECHNICAL SKILLS

- **Languages:** Python, Java, Rust, C, JavaScript, TypeScript
- **FW / Lib / DB:** NumPy, Pandas, Tokio, Serde, Express, Flask, MongoDB
- **WebDev:** React, Next, Tailwind, Supabase, Vercel, Railway, Selenium
- **DevOps:** Docker, AWS, Git, Linux, Terraform, CI/CD, KVM
- **Tools:** Power BI, Burp Suite

PROJECTS

- **Portfolio Website ↗ :** Built a modern portfolio website using React.js, Vite, and Tailwind CSS with responsive design and optimized performance across all devices
- **Decision Tree Machine Learning System:** Developed a machine learning system in Java implementing decision tree algorithms with entropy calculations and information gain for data classification. Built modular data processing architecture with CSV integration and efficient memory management
- **Event Scraper ↗ :** Developed a web-based event data extraction system using AWS Textract, S3, and Boto3 for cloud integration. Implemented automated web scraping with Selenium, Flask/FastAPI backend, and LLM integration for structured data extraction
- **System Monitoring ↗ :** Developed a real-time system monitoring tool in C++ using Poco library and Linux system calls to track CPU and memory usage on Linux systems
- **Home Lab Management:** Built and maintained a KVM virtualization lab on Pop!_OS, deploying Linux VMs with custom network configuration, SSH access, and static IP management

EDUCATION

Honours BSc Computer Science with CO-OP Option   September 2020 – April 2025
University of Ottawa   *Magna cum laude*

- **Relevant Courses:** Data Structures and Algorithms, WWW Structures, Techniques and Standards, Operation Systems, Introduction to Data Communications and Networking, Design and Analysis of Algorithms, Computer Networks and protocols, Computer Methods in Picture Processing and Analysis, Introduction to AI

LANGUAGES

- **English** - Native or Bilingual Proficiency
- **Turkish** - Native or Bilingual Proficiency
- **French** - Professional working Proficiency