

Elyas Belkhir

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EDUCATION

The University of Texas at Dallas

Bachelor of Science in Computer Science

Expected Dec 2024

Richardson, TX

EXPERIENCE

Paycom

May 2024 – Aug 2024

Software Developer Intern

- Reduced codebase build failures by 20% by developing a machine learning model in **Python** with 92% accuracy to pinpoint high-risk merge requests
- Decreased code review time by 15% saving 100+ testing hours monthly by creating a **React** dashboard that provides real-time alerts of issues in merge requests
- Streamlined data retrieval and model updates on 400k+ **GitLab** & **Jira** records by developing REST APIs using **C# .NET** and **MySQL**, integrated with a **Flask** API for model calculations

UTD Networking Lab

May 2024 – Aug 2024

Undergraduate ML Researcher

- Researched network security against Zero-Day DDoS attacks, achieving 98% detection accuracy with less than 1% false positives by developing a machine learning model using simulated netflow data in **Python**
- Advanced threat detection research by analyzing netflow data retrieved by aggregating network packet information

UTD Nebula Labs

Sep 2023 – May 2024

API Developer

- Provided backend for student-led open source projects used by a 1000+ students by integrating 6 major university data systems into a single API using **Go** and **MongoDB**

iCode

Sep 2023 – May 2024

Robotics Instructor

- Led a robotics curriculum for a team of 5+ students, focusing on hands-on programming and robotics challenges
- Mentored students in building VEX robots using motors and sensors and programming them using **C++**

PROJECTS

Chip-8 Interpreter | *C++*

- Engineered a CHIP-8 emulator in **C++**, enabling the execution of original CHIP-8 programs by utilizing memory pointers, custom opcode handling, and graphical rendering via **SDL**

Facility Pulse | *Swift, Python, Firebase, Flask*

- Developed a **Swift** iOS app with a team of 4 that monitors and displays health metrics of building systems
- Spearheaded the creation of a random forest classifier model with an accuracy of 95% to predict a facility system's next service time based on prior data
- Secured 3rd place in the CBRE sponsor challenge, outperforming 20+ competing projects

Anomaly Detection Research Project | *Python, Pandas, Numpy, OpenCV, PyTorch*

- Implemented and compared machine learning models (RNN with LSTM, 3D CNN) for real-time anomaly detection using **Python**, **OpenCV**, and **PyTorch**, achieving up to 76.15% accuracy
- Developed a data preprocessing pipeline with ResNet50 for feature extraction, optimizing video frame processing

LEADERSHIP

Algorithmic Computing Club – *President*

- Led weekly coding sessions to a 100+ member student group helping enhance proficiency in data structures and algorithms for technical interviews

TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, Go, JavaScript/TypeScript, SQL (MySQL, Postgres), HTML/CSS, PHP

Libraries & Frameworks: Node.js, Next.js, .NET, Flask, RabbitMQ, React, Hadoop, Kafka, Redis, Pytorch

Cloud & DevOps: AWS, GCP, Azure, Kubernetes, Docker, Vercel, GitLab, Git, DigitalOcean, CI/CD