

# Robert Cocker

Dallas-Fort Worth, TX

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## Summary

Versatile technical professional pivoting to AI/ML, data science, data engineering, advanced and high-performance computing, open-source software development, systems programming, and robust, secure, and scalable technologies. Grounded in data science, applied psychology, bioinformatics, systems programming, and infrastructure tooling with experience spanning academic research, enterprise IT, and engineering. Building sound, ethical, responsible, mission-driven AI, systems, and secure technologies. Avid contributor and developer within FreeBSD and Linux software development and open-source projects with an aptitude for extensive and rigorous research and development for foundational solutions.

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## Technical Skills

- Programming: Python, Rust, Mojo, C, R, SAS, MATLAB, SQL, COBOL, and more
- Libraries & Frameworks: TensorFlow, Keras, Pandas, Scikit-learn, SPSS, Deep Learning frameworks and more
- Tools & Systems: Git, Jupyter, VS Code, AutoCAD, Bash, UNIX, Linux, FreeBSD, IBM z/OS, database management and more
- Data Engineering: AIML pipelines, ETL methodologies, open-source security tooling and more
- Cloud/Infrastructure: Mainframe-cloud hybrid environments, Slurm, Ubuntu and more
- Productivity: Microsoft 365, Google Workspace, Agile methodologies and more

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## Soft Skills

- Communication & Collaboration: Cross-functional communication, team collaboration, and stakeholder engagement
- Problem Solving: Advanced analytical thinking, adaptability, solution-driven mindset, and proactive troubleshooting
- Interpersonal Abilities: Relationship building, teamwork, conflict resolution, and positive attitude
- Leadership & Initiative: Brand building, project ownership, mentorship, and driving results

- Productivity & Organization: Time management, Agile methodologies, multitasking, and continuous learning
- People Person: Building with forward thinkers of tomorrow and listening to all backgrounds from all different walks of life

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## **Professional Experience**

### **University of Texas at Arlington**

#### **Undergraduate Researcher**

Jan 2025 -- May 2025

Jan 2024 -- May 2024

- Studied identity behavior in I/O psychology with EAST Lab (Dr. Michelle Martin-Raugh)
- Cognitive psychology and neural modeling research (Dr. Daniel Levine)
- Data-driven, online, security, and privacy research with SPR Lab (Dr. Shirin Nilizadeh)
- Study and research in quantitative/qualitative analyses for cognitive neural modeling
- Experience in experimental design, literature review, and research interpretation

#### **Student Assistant, UTA Libraries**

Jan 2023 -- Sep 2023

- Supported digital archive management, backend library systems, and data curation for university publications and resources.
- Collaborating with student body. Bridging the gaps and building university libraries technologies.

### **IBM**

#### **Mainframe Systems Administrator Apprenticeship**

Jan 2022 -- Dec 2022

- Managed mainframe and cloud hybrid environments for banking/enterprise clients
- Specialized in security, data governance, and database administration
- Delivered IT solutions for industry sectors; Oversaw cloud/database integration

### **VM General Construction**

#### **General Contractor**

Jan 1998 -- Dec 2018

- Residential/commercial construction projects
- Projects scheduling, project scopes, and CAD blueprint drafting for architectural planning for residential and commercial projects

## **Enterprise Holdings Inc.**

### **Automotive Fleet Technician**

Aug 2009 -- Jun 2017

- Conducted diagnostics, repairs, preventive maintenance, and ensured fleet reliability
- Implemented company procedures for quality assurance and vehicle servicing

Other companies not listed: **Amazon.com, Inc, GameStop Corp.**

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## **Education**

### **University of Texas at Arlington**

B.S. Data Science, Psychology Concentration, Biology Minor  
GPA 3.3, Expected Graduation 2026

### **Lincoln College of Technology**

A.S. Automotive and Diesel Technology  
GPA 4.0

### **Tarrant County College**

General Core Requirements

### **Dallas College**

General Core Requirements

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## **Certifications**

- IBM Data Science Professional Certificate. Coursera
- IBM Data Scientist Career Guide and Interview Preparation. Coursera
- TExBioMed Summer Institute. NIH. SPR Lab Research. UT Arlington

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## **Projects**

### **The FreeBSD Project**

- Delivered a robust automated CI/CD pipeline through the Potatobot GitHub Actions app, significantly improving build and integration efficiency for the FreeBSD source tree fork.
- Enhanced community collaboration and open-source project quality by active membership and contributions to the FreeBSD ecosystem, accelerating development and deployment cycles.

## **LnOS Arch Edition**

- Spearheaded development with founding student body of a custom Arch Linux distribution tailored specifically for University of Texas at Arlington students, enhancing accessibility to essential engineering tools and applications.
- Delivered a lightweight, rolling-release system with pre-configured environments and automated installation, optimizing software availability and usability for diverse student hardware architectures.
- Elevated user experience and system security by integrating cryptographically signed releases and streamlined update processes.
- Actively contributed as part of the Mavericks student team in an ongoing, work-in-progress project aimed at continual improvement and expansion of functionality.

## **The Mojo Programming Language**

- Automated the synchronization and update workflow for the Modular Platform source tree fork, ensuring reliable and timely incorporation of upstream changes.
- Streamlined development efficiency and reduced manual update errors by implementing a robust auto-update automation system integrated with CI/CD.
- Active member of the Mojo community, contributing to open-source ecosystem growth while continuously advancing expertise in the Mojo programming language.

## **Capstone Project 1 – Machine Learning for Infant Mortality Assessment**

- Senior undergraduate capstone project, first semester of a two-semester sequence (Capstone 1 and Capstone 2).
- Led development of a machine learning model leveraging key health indicators from the Annual Health Survey (India) to predict infant mortality risk.
- Utilized data science techniques including feature analysis, model training, and validation to improve prediction accuracy and health outcome insights.
- Delivered actionable analytics supporting public health efforts through data-driven risk assessment.
- Collaborated closely with project team to maintain code quality and reproducibility with secure Python practices and environment automation.

## **Machine Learning for Cancer**

- ML model for cancer diagnosis (Kaggle challenge). Analyzed clinical features to improve treatment predictions
- Continued research in this space for collaboration across expert domains of study

## **Super Palm Tree (SPT) Repository**

- Developed a versatile build and test automation framework supporting multiple programming languages including Fortran, C, C++, CUDA, Go, Python, Mojo, Rust, and more.

- Enhanced open-source software development and continuous integration efforts by providing reliable, cross-language benchmarking and testing tooling.
- Fostered community-driven quality assurance for free and open-source software projects through extensible and adaptable automation pipelines.

### **SpaceX Landing Success**

- Developed predictive model using launch site, payload mass, orbit type, and booster version for IBM Data Science Professional Certificate capstone; enhanced mission reliability

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## **Open Source & Community-Driven Technology**

- The FreeBSD Project: Learning and building source architecture, CICD pipelines, server-grade software development
- Mojo: Systems programming language. AI infrastructure development with community-driven software development for production-grade technologies.
- Linux User Group Northern University of Texas Students (LUG NUTS at UT Arlington): Among founding student body & elected officer for Unix and Linux student organization; led LnOS development (A student-built rch-based Linux distribution built by Mavericks for Mavericks)
- NSDC National Student Data Corps (UT Arlington): Among founding student body for NSDC – UT Arlington chapter; focused, collaborative, and purpose-driven student organization pursuing data-driven research and building with collaborative data science initiatives, workshops, and hackathons.

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## **Professional Memberships (Past and Present)**

- Society of Asian Scientists & Engineers (SASE)
- Students in Computing and Artificial Intelligence (SCAI)
- American Institute of Aeronautics & Astronautics (AIAA)
- Linux User Group Northern University of Texas Students (Lug Nuts)
- National Student Data Corps (NSDC)

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## **References**

Available upon request.