Eric Youmans

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Clearance Information

Clearance Level: Secret, Department of Defense (Active)

Education

University of Texas — Austin, TX
Master of Science in Artificial Intelligence, 4.0 GPA — *Aug. 2024 – Present*

University of Maryland — College Park, MD
Bachelor of Science in Computer Science and Economics, 3.31 GPA — *May 2021 – Dec. 2023*

Montgomery College — Rockville, MD
Associate of Science in Mathematics, 3.44 GPA — *May 2019 – May 2021*

Experience

Software Engineer — Jan. 2024 – Present
DEVCOM Army Research Laboratory, GTS LLC — *Adelphi, MD*

- Developed multiple data collection algorithms in **C** tailored for proprietary hardware, resulting in a **30%** increase in data acquisition efficiency, enabling robust datasets for **ML** training and validation
- Engineered multiple machine learning and detection algorithms using **TensorFlow**, **LiteRT**, and **Python**, improving model prediction accuracy by approximately **25%**, validated through **LIME** analysis
- Led 4 interns, providing on-site support and running weekly stand ups
- Collaborated with cross-functional teams to improve efficiency on multi-team projects

Software Engineer Internship — May 2023 – Dec. 2023
DEVCOM Army Research Laboratory — *Adelphi, MD*

- Developed and deployed a machine learning algorithms in **Python**, establishing foundational **ML** capabilities that significantly enhanced system functionality and performance
- Executed advanced data cleansing and complex transformations in **Python**, improving dataset quality and reducing preprocessing errors by approximately **30%**
- Designed and deployed an optimized data collection algorithm in **C**, streamlining data aggregation and increasing data accuracy by nearly **40%**
- Delivered technical presentations, effectively communicating complex information to diverse technical and non-technical audiences

Research Assistant — Aug. 2022 – May 2023
Thomas Drechsel, University of Maryland — *College Park, MD*

- Provided research assistance for "Identifying Monetary Language Shocks: A Natural Language Approach", pioneering new methods in linguistic analysis of economic indicators
- Customized regression **R** packages such as **Lasso** and **Ridge** to gain insight on internal workings of their specific implementations
- Developed **Python** scripts optimizing PDF data parsing and I/O management, enhancing processing efficiency by approximately **67%**

Technical Projects

Tiny Shakespeare Language Model | *PyTorch, Jax* — Sep. 2024

- Developed a bigram language model and multi-head attention model in **PyTorch** trained on the Tiny Shakespeare Corpus
- Re-implemented models to **JAX**, deepening expertise in functional machine learning frameworks

Technical Skills

Languages: C/Embedded C, Python, JavaScript, Java, HTML/CSS, Markdown, R, JAX
Tools/Systems: Git, ZephyrRTOS, VS Code, Linux, BluetoothCTL
Frameworks/Libraries: TensorFlow, Pytorch, LiteRT, Pandas, Polars, NumPy, Matplotlib, LIME