Joseph Williams

(251) 888 – 0787 | joseph.williams747@proton.me | github.com/jwilliams2023 | linkedin.com/in/jwilliams2023 | Personal Website

EDUCATION

Auburn University **Aug. 2023 – Dec. 2025**
Bachelor of Science in Computer Science, Minor in Statistics *Auburn, AL*

- **GPA:** 3.85 / 4.00
- **Honors:** Walt and Virginia Woltosz Scholarship (100% tuition), Chime Bank Scholars Foundation Award
- **Coursework:** AI, Machine Learning, Deep Learning, Data Mining, Data Science, Databases, Data Structures & Algorithms, Linear Algebra I & II, Probability & Statistics I & II

SKILLS

Languages: Python, SQL, R, Java, C++, JavaScript, HTML/CSS
Tools & Frameworks: scikit-learn, PyTorch, pandas, NumPy, Databricks, VS Code, seaborn, Git, Anaconda, Docker
Concepts: Machine Learning, NLP, LLMs, ETL, EDA, Data Wrangling, Data Visualization, Pipelines, APIs, OOP, Web Scraping, CI/CD
Certifications: Databricks Fundamentals, Databricks Generative AI

EXPERIENCE

Protective Life **May 2025 – Aug. 2025**
Data Science Intern *Birmingham, AL*

- Migrated legacy SAS underwriting data pipeline to modern **Python, SQL, and pandas** notebooks/scripts, eliminating technical debt, improving efficiency by **~50%,** and saving **$50k+ annually**
- Developed validation model using **Python and SQL** to assess whether randomly selected current policyholders would still meet today's risk-averse underwriting standards; achieved **95% alignment** and utilized **Git and Azure DevOps** for version control and cloud deployment
- Implemented **3 local LLMs** (via **Hugging Face Transformers**) to convert SAS/R code to Python, using **pandas** to validate correctness of code logic and data outputs for future migration workflows
- Created **10+ ad hoc SQL** queries, transformations, and **Datapane dashboards** to support cross-departmental insights

Auburn University, Dr. Akond Rahman **Oct. 2024 – May 2025**
Software Engineering Research Assistant *Auburn, AL*

- Demonstrated **4 attacks** by exploiting a DNF vulnerability in Ansible, utilizing **Docker** and **Python** to simulate and intercept traffic for package injection in a controlled Linux environment
- Analyzed **300+ Python packages** assumed malicious using **JSON** to annotate reasoning and source for an empirical study

PROJECTS

Covid Classifier | GitHub | *Python, PyTorch, pandas, NumPy, Anaconda, CUDA, Git*

- Designed and trained a **PyTorch neural network** on GPU to predict COVID-19 mortality risk from health data (**1M+ rows**), achieving **~88% accuracy**
- Performed **data cleaning, imputation**, **encoding**, and **feature engineering** to prepare a high-quality dataset for training

Credit Card Rewards Tracker | Live Site | GitHub | *React, PostgreSQL, Tailwind CSS, Node, Netlify, Git*

- Developed a full stack **React** app using **Tailwind CSS** for credit card bonus calculation and tracking
- Connected a **Supabase PostgreSQL** backend and configured automatic CI/CD deployment with **GitHub and Netlify**

GrubHub Price Match Automation | GitHub | *Python, Tesseract OCR, Selenium, Anaconda, Git*

- Developed **OCR pipeline** with **Tesseract (LSTM RNN)** and image **preprocessing** (contrast, resize, inversion)
- Automated price match submissions via **Selenium**, achieving a **10x speedup and 99% accuracy** across varied cart images

LEADERSHIP & ACHIEVEMENTS

Association for Computing Machinery (ACM) – *Auburn Chapter* **Aug. 2023 – Present**

- **Web Dev Club**, *Vice President (2025):* Led weekly technical lectures and co-developed Touch Grass, a campus event tracking app built with **React, Next.js, Supabase, Tailwind CSS, and Vercel**
- **Competitive Programming Team,** *Competitor:* **12th out of 110**, ICPC 2024 Southeast Division 2 Regional