Joseph Williams

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EDUCATION

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

- **GPA:** 3.85 / 4.00
- **Coursework**: AI, Machine Learning, Deep Learning, Data Mining, Data Science, Databases, Networks, 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, notebooks, seaborn, Git, Anaconda, Docker
Concepts: Machine Learning, NLP, EDA, Data Wrangling, Data Visualization, Pipelines, APIs, OOP, Web Scraping, CI/CD
Certifications: Databricks Fundamentals (adding more maybe)

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** using Hugging Face API to convert SAS and R code to Python, with automated dataset and code output comparison for future migration projects
- Developed **10+ ad hoc SQL** queries, transformations, and reporting visualizations to support cross-departmental needs

Auburn University, Dr. Akond Rahman **Oct. 2024 - May 2025**
SecDevOps Undergraduate 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, CUDA, Anaconda, Git*

- Preprocessed a large Kaggle dataset with **1M+ rows** by engineering features, imputing values, and normalizing inputs for model training
- Developed and trained a GPU-accelerated neural network in **PyTorch** to predict COVID-19 mortality risk from demographic and health data, optimizing with **Mean Squared Error (MSE)** to achieve **accuracy of ~88%**

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

- Automated website price match submissions using **Selenium**, achieving a **10x speed increase** (from 10 minutes to 1 minute)
- Employed **Tesseract Optical Character Recognition (OCR)** machine learning along with **Python** for text extraction logic

Credit Card Rewards Tracker | GitHub | *React, PostgreSQL, Tailwind, HTML, JavaScript, Node, Netlify, Git*

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

LEADERSHIP & ACHIEVEMENTS

Association for Computing Machinery (ACM) **Aug. 2023 - Present**

- **Web Dev Club**, *Vice President (2025)* - Lectured and co-led development of club's annual web app
- **Competitive Programming Team,** *Competitor* - **12th out of 110**, ICPC 2024 Southeast Division 2 Regional
- **Ethical Hacking Club,** *Member*