# Joseph Williams

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## EDUCATION

**Auburn University** **Aug 2023 – Dec 2025**
*Bachelor of Science in Computer Science, Minor in Statistics, GPA:* ***3.85 / 4.00*** *Auburn, AL*

- **Honors:** Auburn Woltosz Scholarship (100% tuition), Chime Bank Scholars Award
- **Coursework:** Machine Learning, Deep Learning, Artificial Intelligence, Data Science, Data Mining, Probability & Statistics, Adv. Linear Algebra, Data Structures & Algorithms, Software Engineering, Databases, OS, Networks

## TECHINCAL SKILLS

**Languages:** Python, SQL, Java, JavaScript, R, C++, HTML/CSS
**Tools & Frameworks:** scikit-learn, PyTorch, pandas, NumPy, Databricks, Hugging Face, seaborn, React, Git, Anaconda, Docker
**Concepts:** Machine Learning, NLP, LLMs, ETL, EDA, Data Wrangling, Pipelines, APIs, Testing, Scraping, Agile, CI/CD, Azure Cloud
**Certifications:** Databricks Fundamentals, Databricks Generative AI, AWS Educate Introduction to Cloud 101

## EXPERIENCE

**Protective Life** **May 2025 – Aug 2025**
*Data Science Intern | Python, SQL, pandas, NumPy, Git, Azure DevOps, Hugging Face, LLMs, Datapane* *Birmingham, AL*

- Modernized legacy SAS reporting pipeline with modular Python, pandas, and SQL code, streamlining workflows, increasing **speed by 50%**, and saving **$80K+ annually** in licensing
- 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
- Designed **10+ ad hoc SQL** queries, transformations, and Datapane dashboards to support cross-departmental insights
- Integrated **3 local LLMs** via Hugging Face to automate SAS/R-to-Python code conversion, with pandas logic and dataset validation built in to support scalable and accurate future migrations

**Auburn University, Dr. Akond Rahman** **Oct 2024 – May 2025**
*Software Engineering Research Assistant | Python, Docker, Ansible, JSON, Git, GitHub, Kali Linux* *Auburn, AL*

- Developed Python automation scripts to analyze **300+ malicious packages**, generating structured JSON reports to support empirical research paper
- Simulated **4+ Ansible attacks** traffic intercept package injections using Docker in a controlled Linux environment

## PROJECTS

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

- Processed **1M+ health records** through a robust pipeline with data cleaning, imputation, encoding, and feature engineering
- Designed neural network architecture with ReLU activations, SGD optimizer, and MSE loss, achieving **~90% accuracy**

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

- Deployed a full stack web app using **React** and **Tailwind CSS** to monitor credit card accounts, signup bonuses, and reward milestones via a **central dashboard**
- Integrated a **Supabase PostgreSQL** backend and implemented CI/CD deployment with GitHub and Netlify

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

- Automated browser workflows with Python and Selenium to streamline GrubHub's price match claim process**, reducing manual effort by 90%** and **accelerating submissions 10x**
- Developed photo-based OCR pipeline with Tesseract (LSTM RNN) and image preprocessing (contrast, resizing, inversion), achieving **99% text extraction accuracy** on submitted receipt screenshots

## LEADERSHIP & ACHIEVEMENTS

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

- **Web Dev Club**, *Vice President (2025)* – Led weekly lectures and co-developed annual club app with **20+ students**
- **Competitive Programming Team,** *Competitor* – **12th out of 110**, ICPC 2024 Southeast Division 2 Regional