Akshay Karthik

469-426-1768 | akshaykarthik2024@gmail.com | Linkedin | Github

Education

University of Texas at Austin Austin, TX

Bachelor of Science in Computer Engineering, Minor in Statistics and Data Science *May 2027*

Relevant Coursework: Intro to Computing, Software Design and Implementation, Algorithms, Discrete Mathematics, Elements of Data Science, Software Design for Intelligent Systems, and Statistical Machine Learning

Experience

Information Technology Intern June 2025 – August 2025

Solenis *Wilmington, DE*

- Performed Cloud-Based SSO and performed API testing using tools like Postman to validate authentication flows and system integrations
- GitHub repository workflows to organize branch management and streamline versioning
- Coded and designed a visitor check-in/out application using Power Apps and Power Automate, with features such as real-time tracking, automated time-stamping, and streamlined front-desk operations
- Built and scheduled Python/Bash automation scripts, using Linux, for device metadata reporting on their data collection applications

Machine Learning Research Intern June 2023 – August 2023

Florida Institute for Human and Machine Cognition *Dallas, TX*

- Collaborated with cross-disciplinary research teams to study AI and moral decision-making
- Contributed to the development of a paper that explores human decision-making processes in ethical contexts within traffic light systems
- Researched and implemented reinforcement learning techniques to optimize traffic flow in real-world networks, improving efficiency and safety in traffic control models

Projects

SecuScanAI – Intelligent Security URL Classifier | *Python, SQL, PowerAutomate* June 2025 – Present

- Developed SecuScanAI, an AI component that classifies large URL security scan reports using Python and NLP
- Built automated pipelines to label URLs as valid, duplicate, or high-risk, reducing manual review time by 70%
- Integrated with Microsoft Excel/SharePoint to auto-populate results in real time, thus enabling more efficient vulnerability tracking
- Deployed on internal infrastructure, enabling IT/security teams to prioritize high-risk incidents sooner

AI-Powered Personal Finance Tracker | *Python, Git, HTML, Java* July 2025 – August 2025

- Built a Python-based ML pipeline to determine personal bank transactions (e.g., dining, rent, subscriptions) with $> 90\%$ accuracy on 50k+ labeled samples
- Implemented forecasting models for monthly balance prediction and unusual expense detection to avoid overdrafts and detect fraudulent activity
- Designed Flask REST API and lightweight mobile dashboard for real-time expense tracking and insights

Amazon Adventure with MSPM0 and ST7735 LCD | *C ARM Cortex Assembley* March 2025 – April 2025

- Developed an embedded system-based game using C arm assembly on the MSPM0 microcontroller, focusing on real-time processing and efficient memory management
- Designed and implemented game mechanics with user input handling via switches, a slide potentiometer, and an LCD for visual feedback, ensuring smooth and responsive gameplay
- Created and optimized game sprites using bitmap conversion tools, efficiently managing graphics rendering on an ST7735 LCD to enhance visual appeal

Technical Skills

Languages: SQL, Python, Java, Swift, C, C++, Linux, Git, Bash/Shell scripting, HTML, C#, R
Frameworks: Flask, Node.js/Express, React, PyTorch, scikit-learn, GitHub Actions, Azure, thin-edge.io, Cumulocity IoT, FastAPI, Next.js
Developer Tools: Visual Studio Code, IntelliJ IDEA, Eclipse, Xcode, Jupyter Notebook, GitHub, Power Automate Desktop/Cloud, Azure DevOps, Docker
Libraries: NumPy, Pandas, Matplotlib, TensorFlow, OpenCV, Requests