Akshat Chaturvedi

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EDUCATION

University of Cincinnati, Cincinnati, Ohio **Graduating: May 2027**
Bachelor of Science, Computer Science GPA: 3.53

- Primary Coursework: Data Structures and Algorithms, Object Oriented Programming, Database Design, Operating Systems, AI and ML
- Awards and Honors: Dean's List, CEAS International Outreach Scholarship, UC Global Scholarship

SKILLS

- **Programming:** C++, Python, SQL, PHP, R, JavaScript, C, C#, Java, HTML, CSS, LabVIEW
- **Frameworks and Libraries:** Pandas, NumPy, Pytorch, TensorFlow, Matplotlib, Bootstrap, Express, React.js, Node.js, Flask, MongoDB
- **Software:** AWS, SQL Server, Docker, Git, Microsoft Office, PowerBI, SharePoint, Visual Studio, Tableau

EXPERIENCE

AI and ML Research Intern | National Taipei University of Technology **Jan 2025 – April 2025**

- Integrated Generative AI with SIEM and SOAR platforms using Python and REST APIs, enabling automated rule generation and real-time prioritization of critical security events.
- Developed an AI-powered IoT threat monitoring platform using Python and TensorFlow, automating anomaly detection and reducing false positives in financial security systems.
- Built data preprocessing and alert optimization modules using Pandas and NumPy, improving the Security Operations Center's decision-making speed and accuracy.
- Collaborated with cross-functional teams to deploy scalable AI-driven solutions on Docker, reducing manual intervention by 46% and enhancing the resilience of financial infrastructure.

Data Analyst Intern | Pentagon Consultancy Services **May 2024 – Aug 2024**

- Utilized Python and SQL to collect, clean, and analyze 26 datasets, storing processed data in AWS S3 and creating interactive data visualizations in Tableau to improve data-driven decision-making.
- Developed predictive models and performed statistical analysis to forecast key business metrics by leveraging machine learning algorithms and conducting exploratory data analysis using Python's pandas and matplotlib libraries.
- Collaborated with cross-functional teams, built interactive dashboards and reports using AWS QuickSight and Power BI to transform complex data into clear and actionable recommendations, leading to a 22% improvement in reporting efficiency.

PROJECTS

Brain Tumor Detection System | Flask, Pytorch [Link] **Dec 2024 – Feb 2025**

- Fine-tuned a pretrained ResNet50 CNN using PyTorch to classify brain tumors into four categories such as Meningioma, Glioma, Pituitary, No Tumor, achieving 94% validation accuracy on a dataset of 3,000+ MRI images.
- Deployed the trained model into a Flask web application with real-time inference capabilities, allowing users to upload MRI scans and receive instant tumor classification results.
- Designed a complete AI pipeline including image preprocessing, GPU-compatible model loading, and a user-facing web interface, enabling end-to-end automation of brain tumor detection.

Budget Tracking Application | JavaScript, React.js, Node.js, MongoDB, Express [Link] **Sep 2024 – Oct 2024**

- Designed and developed a full-stack web application enabling users to set budgets, track expenses, and gain insights through interactive data visualizations.
- Built a responsive and dynamic front-end using React.js and implemented robust RESTful APIs with Node.js and Express for seamless client-server communication.
- Integrated MongoDB for efficient data storage and retrieval, supporting real-time updates and persistent user data.
- Implemented secure user authentication and authorization using Java Web Tokens and bcrypt, ensuring data privacy and account protection.
- Leveraged data visualization libraries such as Chart.js to create intuitive financial dashboards, enhancing user engagement and usability.

Paying Guest Life Application | PHP, MySQL, Bootstrap, JavaScript [Link] **June 2024 – July 2024**

- Programmed a full-stack web application using PHP, JavaScript and MySQL to enable dynamic Property search and user engagement, creating an interactive user interface using Bootstrap resulting in enhanced web browsing.
- Optimized database using SQL queries to enhance performance and implement Ajax-based real-time updates, reducing page reload time and ensuring seamless user interactions for dynamic liking and filtering of Accommodation listings.
- Built a session-based authentication system using PHP and MySQL to secure user data and personalize dashboards, improving user access control and session management, leading to a faster login and Property management experience.