Tommy Aliff

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Summary

Data engineering student with hands-on experience building scalable **data pipelines** and **ETL processes.** Strong foundation in cloud architecture with **AWS certifications** and graduate-level coursework. Demonstrated success implementing data solutions using modern technologies including Apache Airflow and AWS services. Seeking a summer 2025 data engineering internship to apply and expand expertise in building data infrastructure.

Education

- **Radford University**, Radford, VA (**GPA 3.81/4.00**)
    - Bachelor of Science, Computer Science
    - Participating in accelerated M.S. program in **Data and Information Management**
    - Completed graduate-level coursework: **Data Engineering, Cloud Database Architecture**
- **Virginia Western Community College**, Roanoke, VA
    - Associate of Science, Computer Science
    - Graduated: August 2024 - Magna Cum Laude, Phi Theta Kappa

Relevant Coursework

- Data Engineering, Cloud Database Architecture, Data Warehousing, Algorithms and Optimization
- Object-Oriented Programming, Operating Systems, Software Engineering, Software Testing

Selected Projects

- [Reddit Lens](#)**: A Modular Pipeline for Analyzing Reddit Sentiment** (Python)
    - Developed a modular and scalable pipeline for sentiment analysis on Reddit threads and comments, integrating **data collection, transformation,** and **sentiment analysis.**
    - Implemented **real-time and batch data processing** using PRAW, sentiment analysis with VADER and Transformer-based models; offered configurable options for data storage.
- [AI News Animator](#) **(JavaFX)**
    - Created a Java desktop application using **MVP architecture** to visualize news content with AI-generated imagery while ensuring clean separation of concerns.
    - Engineered **REST API integrations** with News API and Stability AI to create dynamic content displays.

Work Experience

- Online Computer Science Tutor, Virginia Western Community College (May 2023 - Present)
    - Delivered personalized online tutoring, empowering students to master core CS concepts.
    - Elevated students' problem-solving & debugging acumen through hands-on code troubleshooting.
    - Used illustrative examples to demystify programming techniques, fostering deeper comprehension.
    - Cultivated self-directed learning by guiding students to effective online resources.

Technical Skills

- **Cloud & DevOps:** Docker, **AWS** (Lambda, API Gateway, S3, EC2, ECS, Cognito, Bedrock, & more), **Apache Airflow**
- **Languages:** Python, Java, SQL, C
- **Databases:** PostgreSQL, Oracle, DynamoDB, MongoDB, Neo4j, Neptune
- **Tools and Frameworks***:* Git, BASH/UNIX, REST APIs, Pandas, Tableau
- **Additional***:* Technical Writing, Agile Project Management**,** LLM Integration

Certifications

- AWS Certified Cloud Practitioner, AWS Certified AI Practitioner, Java Certified Foundations Associate; Information Technology Specialist, Java; Information Technology Specialist, Python

Additional Experience

- **Concrete Finisher,** Concrete Specialties, Inc., Roanoke, VA (March 2021 - May 2022)
- **Carpenter,** Blue Ridge Restoration and Construction, Roanoke, VA (February 2019 – October 2020)