

# James Gavin Brumfield

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## SUMMARY

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Results-oriented Data Scientist experienced in designing data pipelines, developing machine learning models, and delivering actionable insights through advanced analytics. Proficient in Python, R, SQL, and visualization tools like PowerBI and Tableau, with a proven track record of optimizing data processes and enhancing decision-making. Seeking to apply my analytical expertise and passion for data-driven innovation in a forward-thinking organization.

## EXPERIENCE

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### Data Scientist | Artemis Health (Practicum) | September 2024 - March 2025

- Engineered data pipelines for a 1-billion-row dataset in PostgreSQL, optimizing queries with indexing and partitioning to reduce query time by 40%.
- Developed an ensemble of anomaly detection and unsupervised learning algorithms, achieving a 50% reduction in manual review.
- Built real-time data quality dashboards in Streamlit, enabling the client's data operations team to reduce data quality issues through actionable interventions.
- Collaborated with stakeholders to define key quality indicators, aligning the project with broader data governance objectives and existing company infrastructure.

### Application Security Intern | Syneos Health | Morrisville, NC | December 2022 - January 2024

- Integrated code-scanning tools into CI/CD pipelines (Azure, GitLab), reducing security vulnerabilities by 30% and enabling development teams to address issues early in the Software Development Lifecycle.
- Communicated scan results to stakeholders and development teams, facilitating timely, data-driven actions to address critical findings and reduce potential risks.
- Implemented a 'Shift Left' approach, ensuring compliance with national and international regulations and reducing compliance-related risks by 15%.

### Solutions Architect Intern | Syneos Health | Morrisville, NC | May 2022 - December 2022

- Developed PowerBI dashboards with automated data pipelines, increasing data accuracy and providing real-time visibility into project progress for the Enterprise Architecture team.
- Created KPI dashboards that improved the Architecture Review Board's productivity by 25%, enabling effective tracking of performance and identification of process improvements.
- Integrated interactive PowerBI reports with existing SharePoint sites via Power Automate for enhanced team collaboration and streamlined data access.

## PROJECTS

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### Resume Chatbot | [gavchat.streamlit.app](#)

- Developed a Retrieval-Augmented Generation (RAG) system using GroqAPI and Llama 3 70B to create an AI-powered resume assistant, enabling dynamic question-answering about my professional experience, skills, and projects.
- Engineered a data pipeline in Python to preprocess and index my resume data into a vector store, utilizing Llama 3 70B's natural language understanding to enhance retrieval accuracy for contextually relevant responses.
- Designed an interactive interface using Streamlit, allowing users to input natural language questions (e.g., "What dashboards did James build?") and receive precise, context-aware answers derived from my resume content.

### Loan Approval Model and API | [github.com/jgavinb/loan-model-fastapi](#)

- Developed a Logistic Regression model to predict loan approval on a financial dataset, achieving an AUC-ROC score of 0.89 by addressing class imbalance with SMOTE and ADASYN techniques, improving model performance on minority class predictions by 30%.
- Preprocessed and engineered features from a loan dataset using Python, including handling missing values, encoding categorical variables, and applying oversampling methods (SMOTE and ADASYN) to ensure robust model training.
- Deployed the trained Logistic Regression model as a REST API using FastAPI and Docker, enabling real-time loan approval predictions, and serialized the model with joblib for efficient production use.

## EDUCATION

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### Master of Science in Analytics | North Carolina State University | Raleigh, NC | April 2025

### Bachelor of Science in Business Administration: Information Technology | North Carolina State University | Raleigh, NC | 2023

## CERTIFICATIONS

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### PCEP – Certified Entry-Level Python Programmer | Python Institute | 2025

## SKILLS

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Programming: Python, R, SQL

Software: Tableau, PowerBI, pgAdmin, MySQLWorkbench, Datagrip