

Alexander W. James

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EDUCATION

University of Virginia | Charlottesville, VA | August 2023 - May 2027

B.A. in Computer Science, Applied Statistics (Data Science Concentration), Minor in Latin

GPA: 3.929/4.0 (Dean's List)

SAT: 1520 (780 Math, 740 Reading/Writing)

Relevant Coursework: Data Analysis with Python, Data Structures & Algorithms, Programming Languages for Web Applications

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, R, C, SQL, HTML/CSS

Frameworks/Libraries: Pandas, Scikit-Learn, Matplotlib, Beautiful Soup, Node.js, Tailwind CSS

Tools/Technologies: Git, GitHub, Databricks, Power BI, REST APIs, PostgreSQL, PowerPoint, Excel

EXPERIENCE

Hilcorp Energy Company | Houston, TX | May 2024 - August 2024 ; May 2025 - August 2025

Operations IT Data Analytics Intern

- Optimized scheduled Databricks jobs by refactoring backend system into scalable object-oriented Python program, achieving ~45% runtime improvement and dramatic boost in cloud compute/memory efficiency
- Implemented Everitt-Jennings solution for 1-D damped partial differential wave equation in Python to convert distorted surface data to accurate downhole rod pump dynamometer cards, aiding in day-to-day operation for 10,000+ wells
- Analyzed operational trends across 6,000+ plunger lift wells using Python/Pandas and machine learning clustering algorithms with Scikit-Learn to identify optimal settings, creating an estimated \$500,000+ in long-term value

PROJECTS

Word Frames | Public Web Game | [Code](#) | [Game](#) | January 2024 - Present

Python, HTML/CSS, Javascript

- Developed original 5x5 grid word puzzle game with dynamic scoring algorithm utilizing 19,000+ word Scrabble dictionary
- Iterated upon across multiple platforms (Python → Godot → Static Web) - migration to dynamic full-stack currently in progress, utilizing AWS EC2, Node.js, Tailwind CSS, and PostgreSQL
- The motivation for the project came from my life-long love of puzzle games, as I realized I was finally able to create my own

Latin Texts Analysis | Data Analytics Project | [Code](#) | [Dashboard](#) | September 2025

Python, Power BI

- Scraped major Latin text collections using Python's Beautiful Soup library and performed statistical word frequency analysis across multiple authors and works, publishing the results in an interactive Power BI dashboard
- This project was inspired by my 6 years of studying Latin and using online libraries of texts, making them an ideal choice for learning about web-scraping and making HTTP requests with this project

EXTRACURRICULAR ACTIVITIES

UVA Hoo's Ultra Running Team (HURT) | September 2024 - Present

Co-Founder

- Co-founded long-distance trail running club at UVA with ~40 members, co-leading multiple 9-16 mile mountain trail runs

UVA Slacklining Club | August 2024 - Present

Co-Founder

- Co-founded slacklining club at UVA with ~150 members, contributing to rigging and de-rigging lines at weekly practices

ADDITIONAL INFORMATION

Volunteer Work: Teaching Python at after-school program for middle schoolers (AIM CS), SAT tutoring, Latin tutoring

Interests: Running, rock climbing, slacklining, puzzle games, vinyl record collecting, live music, playing guitar (self taught)