

Zach Norman

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Experience

Application Engineer, Vanguard – Malvern, PA May 2023 - Present

- Develop AWS Lambda functions to ingest data from internal data lakes, APIs, and third-party platforms, performing transformations and loading data into S3 buckets, internal databases, or external platforms.
- Communicate with business clients on building and enhancing data pipelines by gathering requirements, translating them into technical specifications, and creating detailed documentation for future reference.
- Design data visualizations using Plotly to monitor and track the success rates of 20+ daily business-critical reports to provide insights into common failures and areas for improvement or future development.

Contracted Developer, Orita – Remote Feb 2022 - Nov 2022

- Engineered a Python program using Django to automate the generation of business analytics reports from JSON data, leveraging CSS and templates for cohesive and professional report design.
- Implemented a front-end interface using Svelte allowing companies to upload their data and connect with third-party e-commerce platforms.

Developer Co-op, Baltimore Orioles – Baltimore, MD Jan 2022 - Sep 2022

- Created data retrieval, aggregation, and the user interface for an amateur baseball player dashboard page using Django and React that allowed for viewing and filtering data on 2000+ draft-eligible players, improving scouting and draft decision-making.
- Introduced advanced editing features for game report audit pages, including adding, deleting, and reordering data rows, improving data accuracy and usability for coaches and analysts
- Updated multiple AWS Lambda functions responsible for data retrieval, calculation, and population to ensure storage of accurate game and player data.

Projects

NBA Betting Visualization *GitHub, Website* Feb 2023 - Apr 2023

- Collaborated on building interactive D3 visualizations to compare betting odds across multiple sportsbooks for NBA games, leveraging data from The Odds API.

Generate Website *GitHub* Jan 2023 - Apr 2023

- Contributed to the React-based website for Generate, a student-led product development organization, by implementing mobile responsiveness on the site to improve usability for current and prospective members and companies.

Image Processor *GitHub, Website* Nov 2022 - Dec 2022

- Created a WebGL-based application that allows users to upload images and apply custom kernel-based filters, enabling real-time image processing in the browser.

Education

Villanova University, MS in Applied Statistics and Data Science Aug 2023 - Aug 2025
Villanova, PA GPA: 3.6/4.0

Northeastern University, BS in Computer Science and Mathematics Sep 2020 - Apr 2023
Boston, MA GPA: 3.4/4.0

Technical Skills

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

Frameworks/Libraries: React, Svelte, Django, Pandas, Plotly, D3, Tidyverse, WebGL

Tools: Git, AWS (Glue, Lambda, IAM, S3, Cloudformation), Docker, Figma