Zach Norman

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Experience

Application Engineer, Vanguard – Malvern, PA   May 2023 - Present
- Build out AWS Lambda functions to extract data on 50,000+ funds, benchmarks, and portfolios from internal data lakes, APIs, and third-party platforms, transform, and load data into internal and 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 Plotly data visualizations to monitor and track the success rates of 20+ daily business-critical reports to provide insights into common failures and areas for improvement and future development roadmap.

Contracted Developer, Orita – Remote   Feb 2022 - Nov 2022
- Developed a Python program using Django to automate the generation of business analytics reports from JSON data, leveraging CSS and templates for cohesive and reusable report design.
- Implemented a front-end interface using Svelte, allowing companies to upload their data and connect with third-party e-commerce platforms, allowing their data to be analyzed for improved decision-making.

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 32,000+ draft-eligible players, improving scouting efficiency and decision-making for drafts.
- Introduced advanced editing features for pitch-by-pitch game audit pages, enabling coaches and analysts to add, delete, reorder, and mass-update pitch data, resulting in improved data accuracy and usability.
- 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 at Northeastern University, by introducing mobile responsiveness across 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, Flask, Pandas, Plotly, D3, Tidyverse, WebGL
Tools: Git, AWS (Glue, Lambda, IAM, S3, Cloudformation), Docker, Figma