

# Zach Norman

Malvern, PA | zachnorman02@gmail.com | (410) 596-6777

linkedin.com/in/zachnorman02 | github.com/zachnorman02

## 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.
- Collaborate 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

- Built 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.

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

- Developed 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: 3.7/4.0

**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