

Zach Norman

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Experience

Software Engineer I → II (Application Engineer), Vanguard – Malvern, PA May 2023 - Present

- Mentored team members across full-stack development, led code reviews to uphold technical standards, and served as a Level 2 Security Champion to identify and mitigate application vulnerabilities.
- Architected cloud-native serverless ETL pipelines (AWS Glue, ECS, Lambda) processing data across 50,000+ funds, establishing data integrity standards adopted team-wide.
- Collaborated with Fixed Income stakeholders to design and build a React analytics platform via AWS API Gateway, modernizing manual workflows for global clients.
- Automated Tableau reporting for hedged share classes, eliminating manual dependencies and significantly accelerating reporting velocity for global Fixed Income clients.
- Led Bamboo-to-GitHub CI/CD migrations and PostgreSQL/Glue upgrades; authored a shared Python library and time-zone-aware scheduler that eliminated daylight savings overhead across the team.

Contracted Developer, Orita – Remote Feb 2022 - Nov 2022

- Built a client-facing Svelte interface enabling businesses to upload proprietary data and connect with third-party e-commerce platforms, delivering actionable analytics to external clients.
- Developed a Django/Python pipeline to automate generation of business analytics reports from JSON data, using CSS templates for consistent, reusable report design.

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

- Engineered a Django/React dashboard to aggregate and filter data for 32,000+ draft-eligible players, directly improving scouting efficiency and amateur draft decision-making.
- Introduced advanced pitch-by-pitch editing features (add, delete, reorder, and mass-update) used by coaches and analysts to maintain accurate game records.
- Optimized AWS Lambda functions for data retrieval, calculation, and population, ensuring accurate and reliable storage of game and player records.

Projects

Custom Discord Bot Aug 2025 - Present

- Built and maintain a production Python bot hosted on AWS Lightsail, serving a 400+ member community with slash-commands for role management, content moderation, and event triggers.

Education

Villanova University, MS in Applied Statistics and Data Science Aug 2023 - Aug 2025
Villanova, PA GPA: 3.8/4.0

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

Technical Skills & Certifications

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

Frameworks/Libraries: React, Svelte, Django, Flask, Plotly/Dash, D3, WebGL

Tools: Git, AWS, Docker, dbt, Tableau, GitHub Copilot

Certifications: dbt Fundamentals, Google UX Design Specialization