

Nathan Ferdowski

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Education University of Illinois Urbana-Champaign
Bachelor of Science in Computer Engineering, 2018

Experience

- Jul 24 - Oct 24 **SkillStorm - Software Engineer - Power Platform & Azure**
- Developed scalable business applications for both external users and internal teams using Canvas Apps, Model-Driven Apps, Power Automate, and Power Pages integrated with Dataverse.
 - Created and exposed custom REST APIs using Azure Functions to securely perform CRUD operations on Cosmos DB, enabling dynamic data retrieval and updates from Power Platform apps.
 - Managed environments and security by utilizing business units, security groups and security roles.
 - Streamlined business workflows by automating approvals, notifications, and data transformations with Power Automate flows integrated into end-user applications.
- Mar 23 - Jun 24 **PMM - Senior Software Engineer - Cloud Architecture**
- Designed and deployed a serverless system architecture using AWS Amplify, integrating Cognito, API Gateway, Lambda, S3, and DynamoDB to deliver a scalable, secure, and modular backend for dynamic user workflows and media storage.
 - Built a dynamic, session-aware cart and image upload system using Next.js, DynamoDB, and S3, supporting both guest and authenticated users with identity-based access control.
 - Integrated Stripe Checkout and webhooks to handle secure payments, and triggered post-payment workflows including order persistence and automated transactional emails via AWS SES.
- Apr 20 - Jan 22 **AT&T - Software Engineer - Cybersecurity**
- Designed and implemented a rule-based heuristic detection model using log data from Splunk, improving the identification of potential security threats across internal network activity.
 - Built and maintained a data health monitoring dashboard in Splunk, tracking the volume and integrity of incoming log data to ensure reliability and completeness of security analytics.
 - Collaborated with cybersecurity teams to perform data analysis on internal traffic and anomaly patterns, generating dashboards and executive reports that informed policy and security decisions.
- Feb 19 - Apr 20 **AT&T - Software Engineer - Full Stack Developer**
- Developed modular, interactive UI components using Angular and Vega-Lite in a Micro-Frontend architecture, enabling dynamic visualization of network security data.
 - Collaborated on backend services by integrating MongoDB and Cassandra data sources, and supported CI/CD pipelines using Jenkins to streamline deployment and testing of full-stack features.

Projects

- Jan 25 - Present **Litecoin Whale Watcher** (Python, PostgreSQL, AWS EC2, Docker, Nginx, Node.js, Express)
- Built a full-stack crypto analytics tool that tracks activity from the top 200 Litecoin addresses.
 - Automated whale transaction detection using Python and APIs, sending alerts to a Telegram channel.
 - Containerized and deployed a PostgreSQL database with Docker on AWS EC2 to persist and query wallet transaction data.
- Mar 25 - Apr 25 **Distributed Logistics Tracker** (Spring Boot, RabbitMQ, PostgreSQL, Docker)
- Built a microservices-based logistics simulation using Spring Boot, with services for intake, routing, and tracking packages.
 - Implemented asynchronous communication between services using RabbitMQ queues to simulate real-world message passing in distributed systems.

Skills

Languages, Frameworks, and Tools:

Java, Python, JavaScript, TypeScript, HTML, CSS, Angular, React, Next.js, Spring Boot, Express.js, Node.js, Vega-Lite, PostgreSQL, MongoDB, Cassandra, Cosmos DB, RabbitMQ, REST APIs, Webhooks, Splunk, Git, GitHub, Jenkins, Docker, NGINX, CI/CD Pipelines

Cloud, DevOps, and Architecture:

AWS (Lambda, S3, Cognito, API Gateway, EC2, DynamoDB, SES, Amplify), Azure (Functions, Cosmos DB), Serverless Architecture, Cloud Architecture, Solutions Architecture, Microservices, Micro-Frontend Architecture