

# Ning Zhang

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## SUMMARY

- **Proactive and results-driven Full Stack Developer** with expertise in **Node.js**, **Serverless**, and **AWS services**. Skilled in developing **scalable**, **user-centric** software solutions. Excel in problem-solving, demonstrating exceptional **motivation** and adeptness in **high-pressure**, **fast-paced** environments.

## SKILLS

- **BACK-END DEVELOPMENT:** TypeScript, Python, Java, C#, Clojure, Node.js, NestJS, Flask, MySQL, PostgreSQL, GraphQL, Serverless, REST API
- **FRONT-END DEVELOPMENT:** Flutter, React, JavaScript, HTML, CSS
- **TEST:** Playwright, Jest, Postman, Selenium
- **CI CD:** Git, GitHub Action, Docker, CircleCI
- **AWS:** Lambda, S3, Redshift, DynamoDB, API Gateway, EC2, ECR, RDS, CloudWatch, CloudFormation, Step Functions
- **Others:** Kafka, Datadog, Auth0, Linux, Swagger, Infrastructure as Code, Data Structure and Algorithms, Microservices, Confluence, Jira, Scrum, Kanban, Object Oriented Programming, Functional Programming

## EXPERIENCE

**Software Engineer** | TaxBit | 03/2021 – 07/2023

- **User Account Information Service:** Developed a service using **AWS S3**, **DynamoDB**, and **Redshift** within the **NestJS** Framework, Halving the user information download time for extensive datasets.
- **Automated Testing Suite:** Led the initiative to develop an end-to-end automated testing suite using **Playwright**, **Auth0**, **Docker**, **AWS ECR**, and **CircleCI**, safeguarding the Customer Identity Access Management service quality and reducing bug detection and response time by 30%.
- **Lambda Function Optimization:** Examined inefficiency in **AWS Lambda Functions**. Migrated the implementation from **Clojure** to **TypeScript**, achieving a 350% reduction in lambda cold start latency.
- **Transaction Ingestion Pipeline:** Collected reporting requirements from stakeholders, designed and implemented **ETL ingestion pipeline** using Lucidchart, Confluence, and AWS workflow Studio to enhance business intelligence functions.
- **Transaction Classification Feature:** Engineered a Transaction Classification feature leveraging **AWS Aurora RDS**, **PostgreSQL**, and **AWS Lambda Functions**, enhancing product differentiation and competitive edge in the market.
- **REST API Development:** Designed and deployed **REST API** endpoints with best practices using **Swagger** and the **Serverless** Framework, validated with **Postman**, facilitating feature development across different teams.
- **Maintenance of Product Features:** Took ownership of the ongoing maintenance of product features, including debugging and conducting unit tests, end-to-end tests and service monitoring using **Jest** and **Datadog**, ensuring high reliability and performance.

**Full Stack Engineer** | Western United States Pipe Band Association | 01/2020 – 09/2020

- **Collaborative Schema Design and Authentication Setup:** Collaborated seamlessly with the data engineering team to craft a well-structured schema and established a **MySQL** database. Implemented robust user authentication mechanisms, harnessing the capabilities of **AWS Amplify** and **AWS Cognito**.
- **Cross-platform Mobile UI:** Responded to user requirements by introducing mapping, calendar, and payment services within **Flutter** framework for Android and iOS platform, leveraging Google Map API and PayPal API.
- **Standardized Frameworks and Codebase Optimization:** Implemented industry best practices in development processes. Executed extensive code refactoring to enhance testability and maintainability. Rigorously tested APIs using **Postman** and scaled documentation efforts with **Swagger**.

## PROJECTS

**Machine Learning** | Python | ImageAI | Jupiter Notebook | Pandas | Seaborn | bokeh

- Engaged in a comprehensive learning journey covering various Machine Learning stages, including data importation, cleaning, splitting into training and test sets, model creation, output evaluation, and model enhancement, utilizing Jupiter Notebook. Innovated an Image prediction application leveraging the ImageAI library.

**Flask Web Development** | Python | Flask | Selenium | HTML | CSS | JavaScript

- Conceptualized and executed a portfolio website using Flask, integrating HTML, CSS, and JavaScript. Implemented Message Flashing for error handling and form submission feedback. Developed Automated Tests with Selenium, ensuring systematic functionality verification. Incorporated a single-page password checker application, applying k-anonymity for secure communications with third-party APIs.

## EDUCATION

**Master of Science (M.S.) - Information Systems**

Trine University, Phoenix, AZ

01/2024 – 12/2025

**Bachelor of Science (B.S.) - Computer Science**

University of Utah, Salt Lake City, UT

08/2018 – 12/2022