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Executive Summary

I am a software engineer with **over 10 years of experience** in software development and technical leadership. I have extensive experience with the both product and software development lifecycles— from ideation, architecture, and design to development, testing, deployment, performance, and security.

Core Qualifications

Modern, AI-powered software and API design

Technical leadership and project management

TypeScript, React, Python, and Ruby expertise

Writing, planning, and communication

Building scalable, resilient distributed systems

Customer-centric engineering philosophy

Professional Experience

2023-Present **Staff Software Engineer** — MainStreet — New York, NY and Remote

2021-2023 **Senior Software Engineer**

- Develop and maintain the leading tax credit platform that has **delivered \$200+ million of tax credits** to customers and **raised \$75 million** in venture capital.
- Lead the technical design and implementation of new products, e.g. support for new tax credits that **increased revenue per customer by 5-10%**.
 - Redesigned the data model backing our tax credits to be far more flexible and support multiple tax forms, as well multiple versions of the same form
 - Rearchitected our calculations to be composable, which made calculations easily reusable/testable and significantly improved accuracy/maintainability
 - Built a new unified user experience allowing customers to manage all of their data in one place and claim all of the available tax credits together
 - Together, this **reduced a new credit's time to market from months to weeks**
- Rearchitect critical systems like our data import pipeline, which extracts and transforms third-party financial data into domain-specific models.
 - Identified and documented issues with the previous system, then rebuilt the pipeline with a new library to align it with our existing infrastructure choices
 - Implemented a new queuing strategy to separate jobs into single-responsibility queues, support for job priority, rate limiting, and autoscaling
 - This work led to **a 500% increase in processing efficiency**, the elimination of crashes, and a massive reduction in errors/incorrect data

- Design and implement ML/AI systems, such as:
 - Document parsing and data extraction for tax documents, leveraging fine-tuned models and human-in-the-loop feedback for further refinement
 - Multi-platform tax chat systems powered by RAG (with dynamic chunking strategies), knowledge graphs, few-shot prompting, and user-specific data
 - A custom LLM evaluation tool to manage the documents for RAG pipeline, a wide range of domain-specific evals, and human-in-the-loop feedback loops, **which improved LLM response accuracy rates from under 20% to over 90%**
 - Nearest-neighbor models to estimate tax credit values and classification models for expense/payroll data trained with internal data sets
- Maintain and support custom infrastructure, deployment, and data systems.
- Contribute to organizational leadership by:
 - Leading engineering teams, from product teams that build the core product to tiger teams that explore and prototype greenfield products
 - Representing engineering in cross-functional planning and strategy contexts
 - Helping to develop high-level engineering strategy, as well as designing and refining day-to-day engineering processes
 - Hiring, mentoring, and leading teams of remote engineers across all experience levels

2020-2021 **Lead Software Engineer** — Upright — New York, NY and Remote

2018-2020 **Senior Software Engineer**

- Architected new systems that transformed a seed-stage startup into a Series B startup that **raised a total of \$50 million** in venture capital, such as:
 - **A payment processing system that moved \$10+ million a day at peak**
 - Calculation engines that supported loan underwriting and interest payments
 - Contract-signing services for various financial instruments/agreements
- Built features like in-app notifications and new loan structures/investment vehicles.
- Led the hiring of an entire 15-person engineering organization from the ground-up.
- Managed the development work of multiple distributed teams, including leading architecture and design meetings, one-on-ones, code reviews, and agile rituals.
- Identified and addressed performance issues across the application, ensuring service stability and efficient cross-service communication.
- Identified and mitigated security events and threats, such as financial fraud, DDOS, or spam attacks. Ensured the security of confidential financial documents and PII.

2015-2018 **Software Engineer** — Redemptive Technologies — Remote

2015 **Software Engineer** — Casthaven — Remote

2014-2015 **Software Engineer** — Thirty Labs — New York, NY and Remote

Side Projects

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| Hipsters of the Coast
hipstersofthecoast.com | <ul style="list-style-type: none">○ A gaming content and news site that reached over 2 million users annually at peak and 60% growth year- over-year from 2017-2023.○ Employed a remote team of 10 and generated \$100k+ in revenue. |
| Thousand Leagues
thousandleagues.com | <ul style="list-style-type: none">○ A first-of-its-kind e-sports fantasy app that supported <i>Magic: the Gathering</i> events and player stats. |
| MTGCast
mtgcast.com | <ul style="list-style-type: none">○ A gaming content creation platform that supported blogs and podcasts. |

Education

- 2006-2011 **University of Washington** — Seattle, WA
Bachelor of Arts in Political Science
- 2014 **University of Washington** — Seattle, WA
Certificate in Information Security and Risk Management

Skills and Technologies

Programming:

- TypeScript/JavaScript (React, NodeJs, NextJs)
- Python (PyTorch, LangChain, FastAPI)
- Ruby/Ruby on Rails
- AI/ML
- SQL/PostgreSQL
- CI/CD

Architecture:

- API design (REST and GraphQL)
- Monolith and micro-service architectures
- Distributed systems built with Docker and Kubernetes
- Domain-driven design

Team Leadership:

- High performance cultures emphasizing ownership and accountability
- Managing distributed teams
- Technical and cross-functional leadership
- Agile project management