

# Ethan Fulcher

[fulcherethan@gmail.com](mailto:fulcherethan@gmail.com) | 248 971 3220 | [linkedin.com/in/ethan-fulcher](https://www.linkedin.com/in/ethan-fulcher) | [github.com/fulchere](https://github.com/fulchere)

## EXPERIENCE

---

### Intuit Credit Karma

*Software Engineer III*

2024 - Present

- Architected novel passkey authentication prototypes and ID verification systems, authoring comprehensive Technical Design Documents (TDDs) and executing the migration of critical micro-frontend applications to NextJS
- Spearheaded technical analysis for AI adoption and established LLM tooling protocols, analyzing NLP integration patterns to codify rule-based logic for coding agents and automated documentation workflows
- Collaborated with legal and marketing stakeholders to translate strict email access guidelines into compliant, user-facing authentication architectures

*Software Engineer II*

2023 - 2024

- Engineered identity verification logic and authored TDDs for multi-factor authentication (MFA), implementing protocols to ensure compliance with rigorous application security standards
- Orchestrated the technical migration of ~1.9MM user accounts, translating cross-functional stakeholder requirements into optimized login flows that maintained data integrity throughout the platform transition

*Software Engineer I*

2022 - 2023

- Optimized high-throughput authentication systems to support 32MM monthly login events, translating aggressive user acquisition targets into scalable architectural requirements
- Used React to build ~50 login & registration A/B protocols to improve new and returning user metrics within micro-frontend architectures, supporting the evolution of funnel optimization through close partnership with Product and Analytics

### Michigan State University, College of Engineering

*Undergraduate and Graduate Teaching Assistant*

2019 - 2022

Lead teaching assistant for Object-Oriented Design, Discrete Math, Big Data Analysis, and Database Systems

## PROJECTS

---

### Test User Creation Dashboard (2024 - present)

*Credit Karma side project*

Architected a scalable internal platform facilitating the provisioning of synthetic user data for approximately 10,000 employees, implementing an iterative development cycle through integrated feedback loops from cross-functional stakeholders to refine UI/UX functionality and backend data integration

### Generative Social Media Text Model (2020)

*Personal project*

Engineered a natural language generation system by fine-tuning OpenAI's GPT-2 transformer on tokenized unstructured datasets, applying learning to synthesize novel text sequences that successfully replicated specific linguistic patterns

### Automated Scheduling & Notification Service (2020)

*Personal project*

Engineered a web automation framework that optimized polling frequency to monitor university engineering scheduling resources, integrating Twilio APIs to trigger alerts upon detecting availability state changes prior to project sunseting for university IT network policy compliance

## EDUCATION - Patent Bar Eligible (Category A – Computer Science)

---

**MS, Computer Science - Michigan State University, College of Engineering**

2022

*Focus Areas:* Artificial Intelligence, Natural Language Processing, Evolutionary Computing, Advanced Computer Networks

**BS, Computer Science - Michigan State University, College of Engineering**

2021

*Focus Areas:* Data Mining, Big Data Analysis, Algorithm Engineering, Internet of Things (IoT), Database Systems

## SKILLS

---

### Technical Analysis & Writing

*Documentation:* Technical Design Documents (TDDs), API specifications, architecture diagramming and user flowcharts, Root Cause Analyses (RCAs)

### Engineering and Technologies

- *Core:* TypeScript/JavaScript, React, SQL, Python, GraphQL
- *Emerging Tech:* Large Language Models (LLMs), Generative AI Prompting, Microservices Architecture, A/B Testing Protocols