

# Andrew R. Michael

Pittsburgh, PA – USA

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## Skills

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**Tech/Tools:** Linux, PostgreSQL, Emacs, Git, Docker, Node.js, Nginx, Caddy, Terraform, Nix

**Languages:** Python, SQL, PL/pgSQL, Bash, JavaScript, Lua, Java, misc Lisp and Scheme dialects

**Cloud/etc:** Supabase, DigitalOcean, Backblaze, GCP, AWS, HuggingFace, Netlify, Confluence, Jira

- API design (REST, RPC)
- data schema design
- software integrations
- developer tooling
- relational databases
- infrastructure administration
- documentation
- system automation
- core business logic

## Experience

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### Backend Software Engineer

August 2023 - Present

Hashingz Corp.

Wilmington, NC

- Develop, design, and maintain the backend logic, backend API, API integrations, data schemas, and data processing flows for a cross-platform (iOS, Android) AI-powered mobile dating app ([www.yougee.com](http://www.yougee.com))
- Administrate a self-hosted Metabase server to support business intelligence, data visualization, and analytics
- Pioneered the distinguishing feature of the app— a multifaceted AI-enhanced matching algorithm and search engine that calculates match score rankings using aggregated embeddings of user content and attributes in a vector database (HuggingFace + pgvector), subject to admin-configurable weights
- Ensured user safety by implementing semi-automated content moderation to detect and flag or remove potentially unsafe content in user uploads, including an admin-configurable policy matrix, data retention periods, and alerts
- Enriched application functionality by integrating database activity with third-party providers (OneSignal, RevenueCat, HuggingFace, Google Vision) using serverless JS edge functions on an efficient Deno runtime

### Software Engineer

August 2021 - October 2022

Math and Coffee, LLC

Pittsburgh, PA

- Developed the backend APIs, data models, and logic driving a mobile social media application (iOS)
- Engineered and orchestrated numerous core backing services with a PostgreSQL database as the source of truth, including services for live messaging and realtime event streaming
- Supported user storage and media pipelines by adapting open-source TypeScript middleware for AWS S3
- Increased project flexibility, portability, and scalability by containerizing all services with Docker
- Hosted servers and deployed cloud infrastructure with Terraform, provisioning and configuring application server environments with Bash and Python (ad-hoc shell scripts, Fabric, Ansible)
- Accelerated feature release cycles by automating development tasks, image builds, and testing
- Enhanced deployment process by implementing state-based database delivery through the use of schema diffing tools to autogenerate DDL for migrations
- Integrated Apple Push Notification and App Store payments
- Wrote operations runbooks for routine administrative tasks and procedures, as well as API documentation with client code examples, usage scenarios, and logic diagrams

### Mathematics Tutor and Facilitator

October 2015 - Present

Community College of Allegheny County

Pittsburgh, PA

- Inspiring student growth and academic achievement through both individual and group instruction and coaching in mathematics, software development, computer information technology, and data analytics

## Education

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### Bachelor of Science in Computer Science

October 2019

Western Governors University

Salt Lake City, UT