



# ARTHUR RIECHERT

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Atlanta, GA 30309, United States

## EDUCATION

### Georgia Institute of Technology

Bachelor of Science in Computer Science

August 2023 – May 2026

Atlanta, GA

◦ 3.4/4.0

◦ Courses: Systems and Networks, Database Systems, Design & Analysis of Algorithms, Digital Design Lab

## PROJECTS

### PokeFindr: Interactive Map of Pokémon TCG Vending Machines

November 2024 - Present

Tools: React.js, Mapbox GL, Next.js, TypeScript, Tailwind CSS, Node.js, Git, Python, BeautifulSoup, PostgreSQL [ <https://www.pokefindr.app/map> ]

- Built a responsive web app serving **5,000+ monthly users**, featuring an interactive map of Pokémon TCG vending machine locations, achieving **front-page ranking on Google**.
- Integrated Mapbox GL for real-time location visualization and user-friendly map features such as markers, popups, and search.
- Implemented lazy loading and coad splitting to achieve a **0.2 s First Contentful Paint (desktop)** and **95 + Lighthouse Performance score** in production.

### LinkIs.live: URL Shortener

April 2025 - Present

Tools: Typescript, React.js, Git, Vitest, Docker, Docker Compose, Redis, Go

[ <https://github.com/rieichert-arthur/linkis.live> ]

- Built a full-stack web app that resolves short URLs using Redis for low-latency access, with input validation to block invalid formats and path traversal attempts.
- Containerized the stack with Docker Compose, enabling single-command local setup and portability between development environments.
- Wrote **50+ unit and integration tests** with Vitest and Go's testing package, covering **80% coverage**.

### Upcycle Build: Digital Transformation for Recycling Facility Operations

August 2024 - Present

Tools: TypeScript, React-Native, Firestore, Expo, Git

[ <https://github.com/cwyner/JIB-4342-RamblinRecyclers> ]

- Led development of a cross-platform iOS/Android app with a Firestore backend to digitize and streamline material intake workflows, enabling a cloud-based system at high-volume recycling centers in Atlanta.
- Applied agile project management techniques using Jira, Git, and Microsoft Teams to ensure steady progress for a year-long project.
- Collaborated directly with an industry client, leveraging continuous feedback, usability testing, thorough technical documentation, and iterative design to refine the app based on real-world needs.

### Flight Management Software: MySQL Database

January 2025 - April 2025

Tools: MySQL, MySQL Workbench

- Designed and implemented a MySQL database to support core airport operations, including flight scheduling, flight tracking, passenger/pilot management, and airplane maintenance, while adhering to schema constraints.
- Developed a set of stored procedures to provide safe and convenient ways for users to interact with the database without compromising data integrity.
- Created a series of views to enable clear visualization of complex relationships between flights, aircraft, crew, and maintenance schedules for easier query and analysis.

### OS Scheduler: Multithreaded Program for Processor Scheduling

November 2024

Tools: C, Linux, Valgrind, Docker, Make, GDB

- Developed a custom multithreaded OS scheduler with an LRU and Round-Robin algorithm to manage concurrency across multiple CPU cores.
- Utilized Linux system calls and pthreads to implement thread-safe data structures and synchronization primitives.
- Debugged and profiled code using Valgrind and GDB to identify memory leaks, race conditions, and bottlenecks.

## SKILLS

- **Programming Languages:** TypeScript/JavaScript, C, Python, RISC Assembly, Java, Go
- **Web Technologies:** HTML/CSS, Next.js, React.js, Tailwind CSS, Node.js
- **Database & Cloud Technologies:** MySQL, Firebase, Redis
- **DevOps & Version Control:** Git, Docker, Make, Docker Compose
- **Other Tools & Technologies:** Unix/Linux, Bash, Excel, React Native, Expo, Vitest, Vite