

# JACOB NICOTRA

## Software Engineer

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## EDUCATION

### **App Academy** | Software Engineering Bootcamp

Graduated in Feb 2022

Curriculum focus: scalability, systems design, test driven development, agile methodologies, SOLID principles, algorithms, data structures, databases, pair programming, REST, object oriented programming, responsive design, web applications

### **Elmhurst University** | B.S. in Biochemistry, Magna Cum Laude

Graduated in May 2019

Undergraduate research: developed an effective pesticide detector by analyzing and extrapolating enzyme data using predictive modeling & spectroscopy

## SKILLS & TECHNICAL TOOLS

**Languages:** Python, Java, JavaScript, SQL, HTML, CSS

**Technologies:** React / Redux, Flask, Cloud (GCP, AWS), Node.js, Docker, Git, Django, Express.js, PostgreSQL, Sequelize, SQLAlchemy, JSON, AWS, Linux, DOM, ES6, HTTP, AJAX, Unit Testing (Jest, Mocha - Chai, Pytest)

## EXPERIENCE

### **Software Developer @ Google** (staffed by Synergis)

May 2022 – Present

- Leveraged Google Cloud Platform (GCP) tools such as Cloud Functions, Runs, & Pub/Sub to build and maintain consumer-facing & server-side applications which served thousands of users while processing massive datasets
- Refactored / modernized outdated Node.js, Python, & Java codebases to facilitate modularity, scalability, & testability
- Used test driven development & CI/CD best practices to build efficient testing and automation environments on which to roll out new features as well as maintain existing ones
- Collaborated with Google's artificial intelligence team (DeepMind) to develop cutting edge tools and applications
- Developed automated, cloud-based pipelines to redact sensitive / private user information for security, safety, & compliance

### **Optometric Technician @ Primary Eye Care Associates**

June 2020 – Aug 2021

- Created a data model that automatically measured, monitored and reported on clinic performance, which resulted in a 50% increase in patient elective procedures and generated over \$192,000 in revenue over the course of one year
- Mentored 5 new technicians on technical skills, private data management, and clinical conduct
- Exercised acute attention to detail & empathetic care while treating the ocular health of 30+ patients per day

## PROJECTS

### **Perfect Fit (puzzle swapping app)** | Python, Flask, React

[Live Site](#) | [Github](#)

- Implemented RESTful Python - Flask API routes to reduce latency and serve the frontend high-quality image data
- Secured user information and autonomy through front to backend authentication implementations
- Utilized efficient Flask-SQLAlchemy database models and queries to allow multiple connections between data tables, eliminate unnecessary queries, & reduce server load to achieve a smooth puzzle swapping experience
- Leveraged AWS image hosting to allow users to seamlessly upload and retrieve images as well as local web hosting to store users' progress and custom filtered searches

### **LairBnB (AirBnB for Game of Thrones)** | Node.js, Express, React

[Live Site](#) | [Github](#)

- Combined Express.js API routes with Sequelize joining queries to reduce unnecessary database queries and serve the front end complex date information in order to provide a smooth user experience while booking
- Utilized React - DatePicker to build an intuitive and powerful calendar with custom validations and live feedback to allow users to dynamically see availability, choose and confirm a time-frame, and prevent booking-conflicts

### **Commoji (Discord chat clone)** | Python, React

[Live Site](#) | [Github](#)

- Created a live chatroom by utilizing websockets with Flask to transport the user to a real-time chat experience
- Displayed emoji reactions to the user by configuring backend Python server routes to handle incoming unicode for database storage in conjunction with custom functions in React to translate this unicode to a HTML-supported format