

Jack Kotheimer

FULL STACK DEVELOPER

EMAIL: jkotheimer9@gmail.com | PORTFOLIO: <https://jackkotheimer.com> | GITHUB: <https://github.com/jkotheimer>

Making life easier for other developers since 2018, having mastered the art of simple & secure api creation and bash scripting automation. Searching for an opportunity to create a neural network

Languages	Frameworks	Databases	Tools
<ul style="list-style-type: none">• Java• C• C++• PHP• Python• SQL• JavaScript• Bash	<ul style="list-style-type: none">• Apache CFX• Node.js• Flask• Django	<ul style="list-style-type: none">• MySQL• Amazon RDS• MongoDB• Firebase	<ul style="list-style-type: none">• Git• Linux• AWS/ ECS/EB• Docker compose• SSH• Nginx + Apache• Celery/ RabbitMQ• OpenAPI Spec

Education

Loyola University Chicago	B.S. Software Engineering (Deans List)	May 2020
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Work Experience

Full-Stack Developer	EzClinic	Chicago, IL	January 2021 - Current
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- Wrote documentation outlining the REST API specification for new server logic that would maintain prior functionality
- Completely decoupled server logic from client apps by refactoring the codebase to a REST API written with Django Python
 - Implemented the decoupling of each HTTP request one CRUD function at a time, for both the front and back ends of the app
- Utilized previously written script to deploy each update on a staging server to be tested by QA before being pushed to production
- Currently:
 - Researching multidimensional neural networks to begin work on a medical diagnostic machine learning algorithm

Back-end Developer Intern	EzClinic	Chicago, IL	September 2020 – January 2021
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- Reorganized source code repository and filtered out unnecessary and unsafe files and wrote bash scripts to automate the 3 main deployment mechanisms:
 - Local development & debugging server deployment
 - Remote staging server deployment using ElasticBeanstalk & test result fetching
 - Production server deployment using ElasticBeanstalk & CNAME swap
- The script builds a Docker image for each of the above servers from a templated Dockerfile, which is pushed to Dockerhub for ease of use and version control
 - Built a celery notification system running on a RabbitMQ server into each Docker image
 - Configured MySQL, RabbitMQ, and Nginx servers and on each Docker image
 - Wrote several deployment hooks to run the Django wsgi on Nginx, connect it to the MySQL server, & connect a Celery notifier to the RabbitMQ server
- Executed the migration from a local database to a remote database with a secure authentication of credentials upon deployment

Computer Science Tutor	Loyola University Chicago	Chicago, IL	November 2019 – May 2020
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- Tutored Loyola Computer Science students on an appointment basis
- Ensured high quality aid to all students both during and outside work hours

Research Assistant	Loyola University Chicago	Chicago, IL	July 2019 – December 2019
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- Analyzed videos of CPS courses, ensuring curriculum and research standards were upheld
- Participated in a series of seminars determining the most effective educational techniques for computer science

Java Programming Instructor	Digital Media Academy	Chicago, IL	June 2019 – August 2019
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- Taught fundamentals of the Java programming language to high school students
- Structured a curriculum with hands-on project based learning

Android Research Developer	Loyola University Chicago	Chicago, IL	May 2019 – June 2019
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- Collaborated with three other software engineers in person, full-time for a month
- Created customizable sign-language-based app for physically and vocally disabled people (see ‘TalkMotion’ under Project Experience tab)

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Projects

Pianoboard	https://jackkothheimer.com/projects/#pianoboard	2018 - Current
<ul style="list-style-type: none">• Wrote a RESTful web service to create music projects which store and process client-made MIDI recordings• All CRUD operations occur in an isolated Node.js API, completely decoupled from the web page server• Web pages rendered with PHP running on an Nginx server. UI CRUD implemented in JavaScript, using XHR requests to the API• Created an opensource deployment mechanism for Docker based applications, using docker-compose and ecs-cli for local and remote deployment respectively• Utilized: PHP, Node.js, Nginx, HTML/CSS/JavaScript, MySQL, Docker, Docker Compose, AWS ECS, Bash, Git		
ChatApp	https://jackkothheimer.com/projects/#chatapp	February 2020 – May 2020
<ul style="list-style-type: none">• Developed a customer service based chatting application with 3 other developers• Team accomplishments:<ul style="list-style-type: none">◦ Pieced together 4 developers' code, mixed between back-end and front-end, into a functioning chat app◦ Communicated entirely through Slack messages to orchestrate the app's construction• Personal contributions:<ul style="list-style-type: none">◦ Wrote Python code using the Flask framework to create the user dashboard, chat request/approval, and chat room C.R.U.D.◦ Created Jinja2 templates to render user and chat info for the dashboard and chatroom web pages◦ Automated the building/deployment of the development server with Bash scripting◦ Deployed the finished product to an AWS EC2 instance for final presentation• Utilized: Python, Flask, Jinja2, HTML/CSS/JavaScript, MySQL, Bash, AWS EC2, Git		
E-Commerce API	https://jackkothheimer.com/projects/#ecommerce	August 2019 – December 2019
<ul style="list-style-type: none">• Built a REST API for a barebones e-commerce website with 2 other developers• Team accomplishments:<ul style="list-style-type: none">◦ Used GitHub as a workflow efficiency tool to merge and test frequent code updates from peers• Personal contributions:<ul style="list-style-type: none">◦ Wrote all CRUD operations for products, and order execution◦ Created a simple UI with HTML/CSS/JavaScript to provide interface for the API• Utilized: Java, Apache Server w/ CXF, Apache Maven, Junit, MySQL, Hibernate, AWS, Git		
TalkMotion	https://jackkothheimer.com/projects/#talkmotion	May 2019 – June 2019
<ul style="list-style-type: none">• Created an Android app to translate sensor readings from hand gestures to text-to-speech commands with 3 other developers• Team accomplishments:<ul style="list-style-type: none">◦ Worked at a full time capacity in close quarters for a month to produce a faux machine learning system◦ Distributed work evenly among each developer with different backgrounds and experiences• Personal contributions:<ul style="list-style-type: none">◦ Created the SQLite model for "training" the computer to recognize gestures◦ Co-wrote the algorithm to recognize a motion based on 2+ training gestures (ask about it!)• Utilized: Java, SQLite, Android Studio, object state machines, machine learning, Git		