

Jack Kotheimer

SOFTWARE ENGINEER

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I am a firm believer in result-oriented work - It only took me three years to complete my undergraduate degree. That is not only because I set a goal to do so, but because I dug in and worked hard, all while remaining on the dean's list and creating projects with other developers as much as possible.

Languages		Frameworks	Databases	Tools	
<ul style="list-style-type: none">• Java• C• C++• Python• Bash	<ul style="list-style-type: none">• PHP• SQL• JavaScript• HTML5/CSS3	<ul style="list-style-type: none">• Apache CFX• Node.js• Flask• Django• Hibernate	<ul style="list-style-type: none">• MySQL• Amazon RDS• MongoDB/Atlas• Firebase	<ul style="list-style-type: none">• Git• Linux• AWS• SSH• Docker	<ul style="list-style-type: none">• Nginx + Apache• ElasticBeanstalk• Celery/RabbitMQ• OpenAPI Specification

Education

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

Back-end Developer Intern	EzClinic	Chicago, IL	September 2020 – Current
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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 transfer of credentials upon deployment
- Completely decoupled server logic from client applications by refactoring to a REST api written in python, using the Django framework
 - Wrote documentation outlining the I/O and application flow of a REST api that would serve the same functionality as before
 - Implemented the decoupling of each HTTP request one REST function at a time
 - Utilized the previously written staging script to test each update before being pushed to production

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)

Project Experience

Pianoboard	https://jackkothheimer.com/projects/#pianoboard	2018 - Current
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- Created 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 uncoupled from the webpage server
- **Utilized:** PHP, Node.js, Apache HTTPD, HTML/CSS/JavaScript, MySQL, Bash, Git

ChatApp	https://jackkothheimer.com/projects/#chatapp	February 2020 – May 2020
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- Developed a customer service based chatting application focused on programmatic database manipulation
- **Utilized:** Python, Flask, Jinja2, HTML/CSS/JavaScript, MySQL, Bash, Git

E-Commerce API	https://jackkothheimer.com/projects/#ecommerce	August 2019 – December 2019
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- Built a RESTful API for a barebones e-commerce website using Java, Apache Server w/ CXF, Apache Maven, Junit, MySQL, Hibernate, AWS, and Git

TalkMotion	https://jackkothheimer.com/projects/#talkmotion	May 2019 – June 2019
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- Collaborated on an Android app to translate sensor readings from hand gestures to text-to-speech commands
- **Utilized:** Java, SQLite, Android Studio, object state machines, machine learning, Git