

# Eric H. Jiang

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## SUMMARY

Highly motivated **M.S. graduate in Computer Science** experienced in **full-stack web development** and machine learning, seeking a full-time position as **software engineer (SDE)** starting any time.

- Programming Language: Python, JavaScript, Java, C++, HTML/CSS, SQL, Haskell, Racket, MATLAB
- Database & Deployment: MySQL, MongoDB, Postman, AWS, Heroku, Surge, Netlify, Docker, Kubernetes, GIT
- Full-Stack Development: React stack with Redux & Hook & Router, Node.js, Express, Axios, Spring Boot, Flask,

## PROJECTS

### Developer Social Network (MERN Full-stack development)

- Built and deployed a full stack social network application using React, Redux, React Hooks, Node.js, Express, MongoDB, Postman, Json Web Token, Heroku *Links: <https://polar-ridge-00162.herokuapp.com>*
- Created UI components using React and integrated them Redux for state management, routed pages with Router
- Built RESTful APIs with Node Express interacting with MongoDB via mongoose schema and tested with Postman
- Encrypted user password with bcryptjs and applied JWT as middleware to authenticate access protected routes
- Created post build script and deployed to Heroku and enabled automatic deploys with Github
- *Technology Used: [React stack](#), [Node.js](#), [Express](#), [Axios](#), [MongoDB](#), [Heroku](#) for deployment*

### Course Scheduling System (React and Spring Full-stack development)

- Implemented React stack workflow to build a vibrant UI friendly course registration website
- Implemented React Hook useState & useEffect to handle onChange events such as fetching data from back-end
- Built RESTful web APIs with Spring Boot generated by JHipster, implemented Bean and developed strong understanding of Inversion of Control and Dependency Injection
- Created and designed a relational database with MySQL and implemented Hibernate for SQL calls
- Deployed front-end to AWS S3, back-end to AWS EKS, and databased to AWS RDS
- *Technology Used: [React stack](#), [Axios](#), [Spring](#), [MySQL](#), [AWS](#) for deployment*

### Community Pet Sitter Program (Front-end development)

- Designed prototypes and developed a responsive web application that provides neighborhood pet sitter finder service
- Built features included user registration, user login, user profile page, service request form, time-slot registration, Google Map API, etc.
- *Technology Used: [HTML/CSS](#), [Bootstrap](#), [JavaScript](#), [Python](#), [Flask](#), [MySQL](#)*

### Images Styles Transfer (Machine learning)

- Applied Neural Style Transfer effect from multiple style images on different segmented objects in a content image
- Implemented pre-trained CNN network and segmentation algorithm, and effectively configured local GPU to boost the computing capacity
- *Technology used: [Python \(NumPy, TensorFlow\)](#), [Neural Network \(CNN\)](#), [Jupyter Notebook](#)*

### Chat Room Protocol Design (Computer Networks Back-end)

- Designed and implemented a stateful and concurrent chat room protocol in the application layer over TCP/IP that the server must be able to handle multiple clients
- Implemented the chat room server to be asynchronous
- *Technology Used: [Python \(socket, json, threading\)](#), [Socket Programming](#)*

## EDUCATION

Drexel University, Philadelphia, PA

Sep 2018 — Jun 2020

**M.S. in Computer Science (GPA: 3.8)**

- Related Coursework: Front-end development, Data Structure and Algorithms, Machine Learning, Computer Vision, Test Driven Development, Computer Networks, Software Engineering Process, High Performance Computing, etc.

Pennsylvania State University, State College, PA

Aug 2007 — May 2012

B.S. in Mechanical Engineering & B.S. in Nuclear Engineering (Dual Degree)

## WORK EXPERIENCES

Project Engineer at Javan Engineering, Fort Washington, PA

Aug 2016 — Aug 2018

- Implemented Agile (Kanban) project cycle for engineering design and safety analysis for pharmaceutical and process plants; managed hundreds of safety devices and routinely interacted with clients onsite
- Automated and integrated engineering calculations and developed high efficiency project management process using MATLAB, Excel, SharePoint, and other process engineering software

Mechanical Engineer at Wood Group, Philadelphia, PA

Nov 2013 — Jul 2016

- Programmed and automated complex engineering calculations using Excel and AutoPipe to evaluate and design nuclear power plants safety systems; traveled to sites to inspect physical condition of piping system

Product Engineer at Lloyd Industries Inc., Montgomeryville, PA

Jul 2012 — Oct 2013

- Developed 3-D animations to demonstrate installation procedures for air ventilation products using AutoCAD, Inventor, and SolidWorks; rebuilt and managed company website and deployed to GoDaddy