

Alan Chiu

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EDUCATION

The Pennsylvania State University, College of Engineering
Bachelor of Science in Electrical Engineering

University Park, PA
Dec 2017

PERSONAL PROJECTS

SwipeX

[Live](#) • [Github](#)

MERN Stack (MongoDB, Express, React with Redux, and Node), Google Maps API, and D3.js

- Assembled a meal swipe trading system website for college students which provides concurrent trading with graphical price summary for each cafeteria, chatroom and price negotiation platform for sellers and buyers, and meetup service in the favors of users
 - Incorporated React-Redux container and Redux selector patterns to architect highly scalable and uni-directional front-end state management
 - Built structural state shape with Express.js to minimize data fetching and utilized Validator.js to validate user input in the controller to prevent saving malformed data
 - Formulated real-time line and bar charts of current and historical prices associating MongoDB and D3.js

Metagram

[Live](#) • [Github](#)

Ruby on Rails, JavaScript (React with Redux), PostgreSQL, AWS S3

- Fabricated a website application of cloned social media Instagram with posts, comments, likes functionalities
 - Harnessed the unidirectional state management of Redux to simplify React components and directly manage data for form inputs and form submission
 - Leveraged Rails polymorphic associations with likes on posts and comments for DRY code
 - Connected the Rails end to AWS S3 for media storage and organization while maintaining content security

The Squid Game

[Live](#) • [Github](#)

JavaScript, CanvasJS, HTML5, CSS3

- Engineered web game inspired by Netflix series “Squid Game” with vanilla JavaScript DOM Manipulation
 - Operated jQuery on events handling, DOM elements selecting to fulfil desired gaming logics
 - Installed CanvasJS for rendering dynamic 2D images and graphic visualization to improve user interface

WORK & LEADERSHIP EXPERIENCE

EU Compliance Services, Inc.

Mentor, OH

Compliance Engineer

Sep 2019 - May 2020

- Implemented EMC (Electromagnetic Compatibility) consultancy and performance evaluation to compliance with European Union (EU) and international requirements
 - Conducted EMC and immunity testing on diverse machineries, assisted with design issues and remedial measures to improve performance
 - Audited electrical safety test standards with HI-POT, earth leakage, ground bond and full assessment of circuit design/layout
 - Provided customized risk assessment and electrical safety test plan based on electromechanical functionalities and environmental surroundings

JM Eagle™

Ashtabula, OH

Controls Engineer

Aug 2018 - Feb 2019

- Developed systems of automated manufacture using PLC languages and corresponding electronic components
 - Integrated safety functions into industrial practice, and schematized automation into designated subsystems to satisfy OSHA regulations and compliance
 - Renovated PLC operating system to maximize the efficiency of assembly production, and reduced 21% of total downtime and lowered defectiveness by 4% quarterly
 - Performed operation data analysis via SCADA, and revised algorithm to manifest its actual performance

SKILLS, ACTIVITIES & INTERESTS

Technical Skills: C++, JavaScript, React with Redux, Ruby on Rails, PostgreSQL, MongoDB, Express.js, Node.js, HTML5/CSS3, Git, AWS, MATLAB, LabVIEW, and SolidWorks

Relevant Coursework: Digital Design, Continuous-time Linear Systems, Communication Networks, Digital Image Processing