New York, NY
(718)578-6558

# Henry Liao
**Full Stack Developer**

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## PROJECTS

**3D Society (Ecommerce Platform)** *Full Stack Developer*
**Duration:** 9 weeks - github.com/chanliliao/3DSociety
**Technologies:** MongoDB, Express, React, Node.js, Bootstrap, Redux, PayPal APIs, JSON Web Token, Bcrypt

- Designed an ecommerce platform for 3D printing community including payment integration utilizing PayPal
- Styled using Bootstrap for its' flexibility and responsiveness
- Created private and public routes and login page which utilized JSON Web Token instead of cookies for better security
- Implemented better user security with Bcrypt for it's reliability and simple application
- Developed a content management system that allows for management of products, orders, and users

**Project Tracker (Activity Management)** *Full Stack Developer*
**Duration:** 6 weeks - github.com/chanliliao/Project-Tracker
**Technologies:** MongoDB, Express, React, Node.js, Materialized, Redux

- Created an activity management application to support project development and tracking of bugs and features
- Developed using Redux over context APIs and MongoDB for scalability
- Styled using Materialized for its' unique look and clean code

**Let's Talk Money (Expense Management)** *Front End Developer*
**Duration:** 5 weeks - github.com/chanliliao/Lets-Talk-Money
**Technologies:** React, Custom Hooks, Context APIs, Materialized, Speechly APIs, LocalStorage Cache

- Engineered an expense management application driven entirely by user voice inputs and commands
- Integration with Speechly's voice recognition tech reduces user input time by 40% compared to manual input
- Utilized Local storage allows for instantaneous data access compared to fetching data over network
- Applied context APIs and custom Hooks over redux for maintainability and simplification of code

**Quick Chat (Real-Time Messenger)** *Full Stack Developer*
**Duration:** 3 weeks - github.com/chanliliao/QuickChat
**Technologies:** Express, React, Node.js, Socket.IO APIs

- Built a light weight and simplified Realtime instant messenger with WebSocket
- Implemented Socket.IO creating a single TCP/IP socket that is continuous and bidirectional for live chat
- Developed with React for easier reusability and integration on future projects

**Wall Climbing RC Car (Senior Capstone Project)** *Project Manager & Software Developer*
**Duration:** 24 weeks
**Technologies:** Python, Raspberry Pi, SolidsWorks, Additive Manufacturing

- Led a group of 6 people to create a wall climbing RC car that utilizes propeller technology as main driving force
- Integrated and mapped RC controller inputs with car's custom propeller system using Python with Raspberry Pi microcontroller to reduce manual controls from 5 to 2 allowing a single operator to control to the car
- Achieved vertical climb of over 2 feet and maintained a constant vertical hold on the wall for 5 minutes

## PROFESSIONAL EXPERIENCE

**Mechanical Estimator –** *Donnelly Mechanical, New York* Jun. 2019 – Mar 2021

- Estimated 250+ commercial jobs with an above average 12% award rate on jobs worth $500,000 to $6 million
- Establish a department wide HVAC estimating template that is utilized by 6 estimators which increase productivity by 20%
- Collaborated with 20+ GCs and with MTA and LIRR on 2 stations expansion project for $4.9 million-dollar contract

**Mechanical Jr. Estimator –** *All Air Mechanical, New York* Jan. 2018 – Jun 2019

- Estimated 100+ commercial and residential jobs with an average 8% award rate on jobs worth $50,000 to $1 million

## SKILLS

**Advanced:** JavaScript, React, Redux, Node.js, Express, MongoDB, VS Code
**Intermediate:** HTML, CSS, Bootstrap, Hooks, Context API, Git, HTTP/REST, Git Bash, Chrome DevTools, NPM
**Novice:** Python, Sass, Materialize, mySQL

## EDUCATION

**New York University**, Tandon School of Engineering Jan 2014 – May 2017
*Bachelor of Science in Mechanical Engineering*
**Relevant Coursework:** Data Structure, MATLAB, Statistics, Probability, Linear Algebra, Discrete Mathematics, Senior Design

**Orange Coast College**, Community College Sept 2012 – Dec 2013
*Computer Science Major*
**Relevant Coursework:** Java Programming Language I, II, Python Programming Language I, II, C++ Programming Language I, II