

# Hantao Liu

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## OBJECTIVE

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Software Development Engineer Internship

## EDUCATION

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**University of Washington (UW), Seattle WA** 09/2014 - 12/2018

*Bachelor of Science*

Major in Electrical & Computer Engineering in Embedded Computing System.

**Northeastern University (NEU), Seattle, WA** 09/2019 - present

*Master of Computer Science*

Major in computer science. The planned courses are Software Development, AI, Programming Languages, and UI/UX.

## SKILLS & INTEREST

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- Language/Technologies: Proficient in Python, Java, C, ReactJS; Familiar with Express, Linus, C++, HTML5, CSS, System Verilog, MATLAB; Experienced in AWS.
- Interest: Software Application Development, Artificial Intelligence, Machine Learning, Embedded System.

## PROJECT AND RESEARCH EXPERIENCE

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**Techleak Programming Platform, Personal Project** 05/2019 - 09/2019

- Implemented the entire frontend with ReactJS and deployed using AWS Amplify.
- Used Express as the core framework to build the backend server and deployed with Heroku cloud platform.
- Built the database with MongoDB.
- Made use of Algolia Instant Search as our core search engine.

**Estimation of Passenger's Origin and Destination, STAR Lab, UW** 09/2018 - 05/2019

- Used Turi SFrame and Panda dataframe for data reorganization and features computation.
- Used Fuzzy Clustering, Random Forest, and Linear Regression to model the data.
- Participated in writing research paper entitled *Transit Passenger OD Estimation from Mobile Sensing Data Using Clustering Algorithm*.

**Confusion Detector, Personal Project** 12/2018 - 02/2019

- Used Microsoft Azure Face API for face recognition and emotion detection.
- Trained a confused face detector model using Random Forest.
- Used OpenCV to activate real-time camera, which fed the frames into a trained model.
- Completed a system which detected confused faces and displayed on a platform which has a frontend written in HTML and a backend written in Flask Python and SocketIO.

**Deep Learning Processor and Algorithm Research, SSR Lab, UW** 01/2018 - 06/2018

- Simulated a Convolutional Neural Network from You Only Look Once (YOLO).
- Implemented convolutional layer with padding, max pooling layer, leaky ReLU, and etc.
- Trained a YOLO model with YOLO3.

**Search Engine, Data Structure and Algorithm, UW** 09/2017 - 12/2017

- Implemented a minheap using array and top-k sort.
- Implemented TD-IDF vector and cosine similarity for search engine.
- Used adjacency list to build a graph for the websites.

## LEADERSHIP

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**Officer, Chinese Students & Scholars Association, UW** 02/2015 - 06/2018

- Event coordinator for 2017 Light-Real Music Festival who is in charge of on all the event planning and arrangement.
- Officer at department of finance and fundraising