

# Matthew Wang

(217)-305-1574 • [MatthewWang2020@u.northwestern.edu](mailto:MatthewWang2020@u.northwestern.edu)

**LinkedIn:** <https://LinkedIn.com/in/matthewwang2020> • **Github:** <https://github.com/Marblez>

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## EDUCATION:

### **Northwestern University**

B.S. Computer Engineering

GPA: 3.6/4.0

Evanston, Illinois

Expected Graduation: June 2020

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## WORK EXPERIENCE:

### **Google**

Los Angeles, California

*Software Engineering Intern*

*June 2019 ~ Sept 2019*

- Worked on Google Ads traffic estimation predictive modelling infrastructure in C++
- Devised a linear regression model forecasting ad impressions/conversions based on campaign performance
- Worked on RPC infrastructure and data generation pipeline to support ad forecasting models
- Implemented monitoring validation that applies predictive modelling to past data to contrast model output with ground-truth data

### **Facebook**

Menlo Park, California

*Software Engineering Intern*

*Jan 2019 ~ Apr 2019*

- Consolidated and improved Messenger Core Graph heuristics for message backend processing
- Built internal killswitch in Hack/PHP that controls individual Messenger Core Graph rule mechanisms
- Built cross-platform thrift service in C++ that unifies Messenger/Instagram Graphs for message processing
- Proposed inclusion of read-receipts on message reactions, then built feature and shipped to production

### **NASA**

Houston, Texas

*Software Engineering Intern*

*June 2018 ~ Aug. 2018*

- Trained neural networks and conducted supervised learning using BrainJS with NASA asteroid data to predict asteroid harmfulness and create data visualization mediums
- Worked on IoT GPS location-tracking software for NASA vehicles in Java on the AndroidThings OS
- Built NASA internal lab and space scheduling system in Javascript with Google Appscript

### **OriHD Inc.**

Chicago, Illinois

*Software Engineering Intern*

*June 2017 ~ Sept. 2017*

- Engineered data-mining Python Scrapy web-crawler to update 6700 air quality data points on Firebase
  - Analyzed AQI data and visualized data with Google Maps Clustering API and PlotlyJS in Javascript
  - Built Android app that uses Bluetooth Low Energy (BLE) to communicate with air purifier hardware
  - Incorporated GPS geocoder tracking, UI elements, Facebook SDK, and Google Maps into Android app
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## RESEARCH EXPERIENCE:

### **Knight Lab Studio**

Northwestern University

*Student Researcher*

*Apr. 2018 ~ June 2018*

- Building automated fact-checker that collects audio data from news sources and verifies its authenticity
- Implemented script to cross-reference news claims with AWS Transcribe and Google Fact-checking APIs
- Built Alexa skill as user interface for users to make vocal queries for facts pertinent to the news source

### **Delta Labs Research**

Northwestern University

*HCI Student Researcher*

*Sept. 2018 ~ Dec. 2018*

- Designing a data-processing engine that matches users based on “shared circumstances” data
  - Building MeteorJS web and mobile application that runs experiences with engine as a backend service
  - Utilizes Yelp API, GPS Location Tracking, and Maps API to create affordances of user circumstances
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## SKILLS:

**Coursework:** Engineering Statistics, Differential Equations, Linear Algebra, Multivariable Calculus, Operating Systems, FPGA Design, Computer Architecture, Signals and Systems, Advanced Digital Design.

**Programming Languages:** C++, Java, Python, C#, C, Javascript/NodeJS, MySQL, PHP, MATLAB, Vim.

**Technologies:** Linux, Web Development, Visual Studio, Web-Crawling, Rest APIs, Software Infrastructure, Web Servers.