

# JING WU

+44 07422 946328 ✉ [jingwuava@gmail.com](mailto:jingwuava@gmail.com) [in linkedin.com/in/jing-wu-415664184/](https://www.linkedin.com/in/jing-wu-415664184/) [github.com/Awhkrd](https://github.com/Awhkrd)

## EDUCATION

### University College London

Master of Science in Health Data Science

Sep 2021 – Sep 2022

London, UK

**Courses:** Advanced Machine Learning in Healthcare and Biomedicine, Statistics and Regression Modelling, Data Mining and SQL, Computer Vision, Computational Genetics of Healthcare

### University of Minnesota

Bachelor of Science in Computer Science(GPA: 3.71/4.0 Dean's List Honor))

Jan 2018 – Dec 2020

Minneapolis, US

## SKILLS SUMMARY

- **Languages:** Ruby, Python, C/C++, JAVA, HTML, CSS, JavaScript, C#, R, SQL, Assembly, CoffeeScript, Swift, OCaml, Haml, XML, Korean(native), Chinese(native), English(fluent)
- **Frameworks:** Scikit, TensorFlow, Keras, PyTorch, Caffe, NLTK, NodeJS, Surprise, Processing, OpenCV, CMake
- **Tools:** RubyMine, STATA, PostgreSQL, Matlab, Docker, Git, Plink
- **Platforms:** Rails, Linux, Heroku, JUnit, WordPress, React, Redis, Doxygen, Javadoc, googletest, Tomcat, AWS
- **Soft Skills:** Leadership, Event Management, Writing, Public Speaking, Time Management

## EXPERIENCE

### Apruve, Inc.

Full Stack Engineer(Full-time/Part-time)

Jun 2020 – Jun 2022

Minneapolis, US

- **Web Application Multi-Language options:** Major contributor of localizing content of web pages with built-in Ruby I18n framework, including not only statistic text content translation, but also currency/money/date display and personalized terminologies provided by creditors and merchants.
- **Amortization Schedule Model:** Contributed to amortization schedule model design and implementation, improving speed by dynamically finding interest rate given loan amount, payment, number of periods with binary search.
- **Reconstruct Creditor Portal API:** Reconstructed API structure and handle JSON file to access creditor interface. Scheduled periodical jobs to automate functions updating database.

### Feedmob, Inc.

Software Engineer(Intern)

Jul 2021 – Sep 2021

San Francisco (Remote), US

- **Ruby and Rails Version Upgrade and Database Migration:** Upgraded Ruby and Rails version of anti-fraud platform(web app) to latest version with positive, negative and edge cases tests. Implemented database migration with bundle. Experienced in both front-end and back-end coding.
- **Enhanced CRUD operations:** Implemented and enhanced CRUD operations for applications using Model View Controller architecture with Active Records. Used Restful API in communicating with third party. Collaborated with project managers and UI/UX experts regarding product story definition, difficulty level and grooming for every sprint period. Used Jira for issue tracking and project management in real time environment.

### Park Laboratory(University of Minnesota)

Research Assistant

Oct 2020 - Dec 2020

Minneapolis, US

- **AI Egocentric Perception:** Participated in Facebook AI Ego4d(Egocentric Cognitive Mapping 4d) project, a computer vision project solving research challenges in egocentric perception and improving immersive experiences by teaching AI understands the world from a first-person point of view.
- **Privacy Information Protection:** Involved in collecting more than 2,200 hours of first-person view video in the wild, featuring over 700 participants going about their daily lives. My contribution included brightening raw video and blurring privacy sensitive data(licence plate, phones and laptops screen) in the video to make it easier to analyze and process computationally.
- **Video dataset Pre-processing:** Prepared video dataset used in developing five benchmark challenges centered on first-person visual experience.(Episodic memory, Forecasting, Hand and object manipulation, Audio-visual diarization and Social interaction)

### Alpine Tango Ski Club

Web Developer & UI/UX Designer(Part-time)

Oct 2021 - Present

London, UK

- **Website Construction with WordPress:** Built ski club website on WordPress and launched on EasyWP with domain name Alpinetango. Used Shopify template for membership and seasonal tickets booking.
- **Marketing Promotion:** Designed logo and User Interface with Adobe Photoshop. Edited market-promoting video with Adobe Premiere. Added a site search performed on a search engine to search through whole domain. Increased website visit count by 23.6% after taking over managing website.

### FusionPay, LTD

Copywriter(Intern)

May 2019 - Sep 2019

London (Remote), UK

- **Marketing Promotion:** Contributed to managing social media platform(Facebook, Twitter, Instagram, Wechat) increasing communications and gaining reputation. Worked on graphic design, article editing, twits promoting, anticipation building, and increased registrations by 27.1%.

## PROJECTS

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### **Early Prediction of Sepsis From Clinical Data** | *Recurrent Neural Network, Time Series* **Dec 2021 – Jun 2022**

- Quantified extent of model transportability and generalization for common ICU prediction tasks such as early prediction of mortality or sepsis.
- Benchmarked performance of common recurrent neural network models trained via empirical risk minimization on several open-sourced ICU databases.

### **Predicting risk of developing diabetic retinopathy using KNN & ANN** | *KNN, ANN* **Dec 2021 – Jun 2022**

- Compared two supervised machine learning (k-nearest neighbors and artificial neural network models using the diabetic retinopathy dataset from Debrecen.
- Feature selection implemented with SelectKBest and hyperparameters tuning with Gridsearch.
- Domain generalization implemented to handle degradation of model performance on unseen data or new populations other than the training dataset.

### **Covid-19 Real-time Cases & Short-term Prediction Dashboard** | *Web Application, ML* **Dec 2021 – Mar 2022**

- Developed a real-time Covid-19 cases dashboard with daily counts of COVID-19 cases, deaths, and recoveries.
- Displayed short-term cases predicted by applying machine learning algorithm.
- Coding in Ruby with Rails framework, including HTML, CSS, JSON and web socket programming.

### **Drone Delivery Simulation** | *C++, HTML, JSON* **Sep 2020 – Dec 2020**

- Developed a virtual drone delivery system with automated robots acting in interactive 3D computer graphics.
- Coded in C++ with Agile software development methodology, handing on HTML, CSS, JSON and web socket programming.
- Implemented several design patterns, including abstract factory, factory, object pool, singleton, decorator and proxy patterns.
- Development tools including Github, Doxygen, Docker, UML and CppLint were used during the process.

### **Social Network Analysis, Salary & New Connections Prediction** | *Supervised Learning* **Dec 2019 - Jan 2020**

- Developed a data science project solved with artificial neural networks implemented in Keras with several techniques including Network Analysis, Supervised Learning, Regression (Salary prediction) and Classification (New connections prediction).
- Compared performance of Naive Bayes, Decision Tree, KNeighbors, AdaBoost and Random Forest with their test accuracy, area under receiver operating characteristic curve(ROC AUC) and training time.
- Found that KNeighbors and AdaBoost are appropriate algorithms in classification and prediction.

### **Campus Bus Booking System** | *Java, MySQL, Android Studio* **Oct 2019 – Jan 2020**

- Developed a web-based Android mobile application with modules including checking bus time and fares, tracking real-time bus location, booking individual and group tickets.
- Developed bus drivers, passengers and admins portal.
- Used MySQL to stored log in information of each users.
- Used create, read, update and delete(CRUD) operations on users/buses/routes/tickets management in database.

### **Voting Counts with MapReduce and Sockets** | *Operating System, Linux, Network* **Sep 2019 - Dec 2020**

- Developed a voting counts MapReduce project with forking worker processes to simulate parallel processing.
- Implemented communication of workers, including mapper, reducer and master processes by pipes.
- Handled concurrency problems with multi-threads by using Spinlock, an efficient busy-wait loop implementation.

### **Random Meal Generator** | *Python, Jupyter Notebook* **Oct 2021**

- Developed a random meal generator for my father to decide what should I cook for him for dinner.
- Numbered more than 300 meals' image cooked by me and generated random number matched url path of images to retrieve from github.
- Visited more than 1,000 times by people in github.

## LEADERSHIP / EXTRACURRICULAR

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### **Qingdao Boulderling & Climbing Club** *Sep 2017 – Jan 2018* *President* *Qingdao, China*

- Organized 4 formal boulderling and climbing events with an average party size of 50 participants. Increased the membership enrollments in the club by 160% during the tenure.
- Coordinated with financial manager and media manager with weekly meetings to plan future incoming events, record financial status and summarize club operating reports.
- Helped countless people find their interests in boulderling and climbing as a life-long sport to stick on.