

Haopeng (Hoppe) Wang

Burnaby, BC, CA

📞 236-862-2640 • ✉ hwa125@sfu.ca • 🌐 github.com/wanghoppe

Summary of Skills

Technical Skills.....

- **Programming Language:** Python, SQL, Javascript, Java, HTML, C++, C, Matlab, R.
- **Big Data/ Data Science techniques:** Hadoop, Spark, Cassandra, Kubernetes, Pandas, Jupyter
- **Machine Learning/ Deep Learning:** Tensorflow, Tensorlayer, Keras, Pytorch, Scikit-Learn.
- **Tools/ Framework:** AWS, Git, React (Native), Expo, Node.js, Django, Android Studio, RabbitMQ

Transferrable Skills.....

- **Active and quick learner** for knowledge and new techs: self-learned many techs/framework as well as online MOOCs and applied the knowledge learned to self-directed projects.
- **Good collaboration abilities** obtained from previous Co-op experience and working with project team members by solving conflicts and helping others in need.

Work Experience

- **Realtor.com** **Richmond, BC, Canada**
Software Engineer, Data Aggregation Co-op *May 2019 - Dec 2019*
 - Worked collaboratively in an Agile/Scrum team to maintain our listing data pipeline and create real estate specific data transformation rule with Java and Javascript.
 - Responsible for resolving customer's and downstream's data-related issues, including data accuracy, data richness, and pipeline performance.
 - Helped our team migrate special datasources to the new data pipeline by writing python scripts to provide migration metrics and automation.
 - Linked MySQL database to Google Sheet using AWS Lambda and Google Sheet API to create a daily auto-generated report which is used to monitor the status of all datasources.

Selected Projects

- **Mobile Music App Development** *Sept 2019 - Jan 2020*
Self-directed
 - Built a mobile application which allows users to extract YouTube audio to the cloud (AWS S3), and provided the functionalities to stream, download, play, and manage the audio within the application.
 - Powered by React Native, and can be built to run on both iOS and Android devices.
 - Deployed the back end service with AWS Lambda and API Gateway to go completely serverless with high scalability and simplicity.

- Cryptocurrency Real-Time Prediction System**
Simon Fraser University
Apr 2019
 - Programming for Big Data II Course Project*
 - Developed a deep learning model (LSTM RNN) to predict Bitcoin price by integrating historical and social media data with news sentiment analysis.
 - Built a streaming system, which includes pipelines for data collection and feature extraction, model prediction, RabbitMQ result publishing, and Node.js Server-Sent Events (SSE), to send real-time price prediction to our web front end.
 - Our React web front end is capable updating charts itself with new incoming prediction as well as displaying the latest cryptocurrency market information and statistical analysis.
- Low Resolution Dark Image Enhancement**
Simon Fraser University
Dec 2018
 - Machine Learning Course Project*
 - Based on the Learning-to-See-in-Dark model, and combined it with SRGAN (Super Resolution GAN) to achieve 4x super-resolution as well as denoising, deblurring, and white balance adjustment for low resolution low light image.
 - Used the dataset provided by the Learning-to-See-in-Dark model, and built our own training data preparation pipeline, which includes image resizing, cropping, and data augmentation.
 - Solved the limitation of original See-in-Dark model: which needs raw HD image data as input.
- Rhythm Reconstruction Using RNN**
Xi'an Jiaotong University
Jun 2018
 - Graduation Project*
 - Built a 3-layer LSTM RNN to learn the rhythmic structure of modern music: reconstructing the pitches from existing music pieces to form new melodies, which can have a style similar to the original one or being totally different.
 - Based on Google Brain Magenta project, used Tensorflow to build and train the model.
 - Applied some techniques includes data augmentation, attention mechanism, and drop off to achieve better performance.

Education

- Simon Fraser University**
Burnaby, BC, Canada
Sept 2018 - Present
 - MSc in Computer Science (Big Data)*
 - GPA: 3.78/ 4.33
 - Xi'an Jiaotong University**
Xi'an, China
Sept 2014 - Jun 2018
 - Bachelor of Energy and Power Engineering*
 - GPA: 84/ 100

MOOC Certificates

- From Stanford Online:**
 - Algorithms: Design and Analysis, *Stanford University* grade: 93%
 - From Coursera:**
 - Neural Networks and Deep Learning, *deeplearning.ai* grade: 92%
 - Machine Learning, *Stanford University* grade: 96%