MINGJIE CHEN

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EDUCATION

University of California, Berkeley, Berkeley, U.S. Aug. 2019 – Dec. 2019
Visiting Student, Fall 2019

Northeastern University, Shenyang, China Sept. 2017 - Present
Bachelor's Degree in software engineering (International, English) (Expected in July. 2021)
The major courses of Software Engineering (International, English) are all provided in English and the professors are from top universities around the world, such as the University of Queensland, Australian National University and the University of Sheffield, etc.
GPA: 3.926 (89.26/100)
TOEFL 103/120 (R: 30, L: 25, W: 25, S: 23) **Best Score**: 106/120 (R: 30, L: 28, W: 25, S: 23) July 2020
JLPT N3 Dec. 2018

SKILLS & INTERESTS

Technical Skills: Java (Spring, Spring Boot, Spring Cloud, SSM), JavaWeb (Vue, HTML, CSS, JavaScript, jQuery, etc.), Python, Lisp (Scheme), SQL, PyTorch, TensorFlow, C, C++.
Interested in Software Engineering and Development, Computer Vision, NLP.

REWARDS & HONORS

- Finalist Award of Mathematical Contest in Modeling (MCM/ICM) (Top 1%) April 2020
- Outstanding Student of Northeastern University (Top 3%) Nov. 2019
- Provincial First Prize of National College Students Mathematical Modeling Competition Oct. 2019
- Second Prize of Northeastern University Mathematical Modeling Competition Aug. 2019
- Second Prize of the National College English Contest May. 2019 & May. 2018
- Provincial Third Prize of 'LanQiao' Cup Algorithm Competition March. 2019
- National Scholarship (Top 1%) Nov. 2018
- First-class Scholarship (Top 2%) Nov. 2018
- Outstanding Students Pacesetter of Northeastern University (Top 1%) Oct. 2018
- Excellent Psychological Commissioner of Northeastern University Oct. 2018
- Liaoning Province English Contest Excellence Award Dec. 2017

RESEARCH & PROJECTS

- **Cross-border E-commerce Borrow-sell Platform** June. 2020 – July. 2020

Developer, NeuSoft, (Front-end Code)(Back-end Code)
Description: We used Vue as our front-end framework, Spring Cloud as our microservices framework, Spring Boot as our container and MVC framework, MyBatis as our ORM framework and Redis as our distributed cache to build this Cross-border E-commerce Borrow-sell Platform backstage management system.

- **CS61B Course Projects in Java** (Code) Sept. 2019 – Dec. 2019

Developer, University of California, Berkeley. (CS61B)
Proj0 Signpost: Finished the puzzle game Signpost with MVC pattern.
Proj1 The Enigma: Stimulated the Enigma machine that Germany used in World War II for encryption.
Proj2 Tablut: Established a chess game and required us to build a simple AI using Game Tree and α-β Pruning.
Proj3 Gitlet: Stimulated a version control system: Git.

- **Vehicle Motion Generation** Sept. 2019 – Nov. 2019

Research Assistant, University of California, Berkeley, MSC Laboratory (MSC Lab)
Advised by Prof. Masayoshi Tomizuka and Ph.D. candidate Liting Sun.
Description: Using Imitation Learning and Reinforce Learning techniques to predict and simulate vehicles driving behavior on roads with the data collected by MSC Lab.

- **Computer Vision for Plant Phenotyping of Maize Plants** July 2019 – Sept. 2019

Research Assistant, North Carolina State University, ARoS Laboratory (ARoS Lab)
Advised by Prof. Edgar Lobaton and Ph.D. candidate Nathan Starliper.
Description: Using computer vision and image processing techniques to perform full plant phenotyping of maize plants for the purpose of monitoring crop health, growth stage, and water stress.
Responsibilities: I was responsible for implementing deep learning techniques for extracting the leaf tips and collars of the plants from the images. These will then be used to determine various geometric/topological properties of the plants that can provide insight into the health of the plant.
The future work aims at combining with 3D images or doing skeleton detection work, etc.

- **Legal Judgement Prediction** Feb. 2019 – July 2019

Researcher, Northeastern University
Advised by Prof. Guibing Guo (Guibing Guo)
We were working on an intelligent law judgment system. The aim was to predict the charges and terms of penalty based on the crime fact description and related law articles. We first implemented an encoder-decoder model and tried different encoders/decoders such as SVM (multiples times for related articles), CNN (to extract features), LSTM (make prediction). We are now working on self-attention and Transformer model.

- **Music Analyze and Recommend Project using Clustering** Mar. 2019 – June 2019

Developer, Carnegie Mellon University
Tutor: Prof. Pradeep Ravikumar (Pradeep Ravikumar)
It was an individual project aimed to utilize the audio feature clustering extracted from raw audio files (mp3s) and build a simple song recommender that suggests new tracks based on user preferences and inputs. I first did clustering (K-means, Hierarchical Clustering, DBSCAN) on the Free Music Archive (FMA) dataset and subsequently recommend songs that are new to the user.

- **Animal Image Detection and Classification System** Dec. 2018 – Feb. 2019

Developer and Team Leader, Institute of Automation, Chinese Academy of Sciences
Advised by Prof. Shuangshuang Li
We implemented an animal detection and classification system based on CNN. We used python web crawler to collect animal pictures as our dataset. We implemented a CNN model of 4 hidden layers with 2 fully connected layers and two Max Pooling layers. We finally used SoftMax function to output multiple classification results.

- **Design of Neu-soft Medical Insurance Reimbursement System & Scenic Spot Management System**

Developer, Northeastern University July. 2018 – Aug. 2018 & Jan. 2019
Java course projects. The former one implemented some thoughts of UML and was totally object-oriented project. The latter one concerned with knowledge of graph and implemented some shortest path algorithms.

PUBLICATIONS

Patent:
- An animal image search system based on convolutional neural network April 4th 2019

Patent number: 2019100354, Australian Innovation Patent, Valid for 8 years.

EXTRACURRICULAR ACTIVITIES

- Class Vice-Monitor Sept. 2018 – Present
- Undersecretary of Student Psychology Club June. 2018 – Jun 2019
- Volunteer at Liaoning Science and Technology Museum Nov. 2018
- Commissary of Mentality in class Sept. 2017 – Aug.2018

OTHER-COURSES

- *UGBA103: Introduction to Finance (Full Attendance Audit)* *2019 Fall*

Dmitry Livdan, Associate Professor, Haas School of Business, University of California, Berkeley
- *Coursera: Deeplearning.ai (Deep Learning)* Dec. 2018 – Feb. 2019

Andrew Ng, Adjunct Professor, Stanford University
- *Online Small-class Tutoring on Machine Learning* Mar 2019 – July 2019

Pradeep Ravikumar, Associate Professor, Carnegie Mellon University