

Di Mei

(+1) 917-561-6240 | dimei2022@u.northwestern.edu | Github: DavidMei99

EDUCATION

Northwestern University

Evanston, IL

- Master of Science – *Computer Science*, Projected December 2022
- Cumulative GPA: 3.9

The Cooper Union for the Advancement of Science and Art

New York, NY

- Bachelor of Engineering – *Electrical and Computer Engineering*, May 2021

Relevant Coursework: Data Structures and Algorithms, Machine Learning, Software Engineering, Communication Networks

WORK EXPERIENCE

Deep Learning Intern

Shenzhen, China

Extreme Vision

Summer 2021

- Managed image data pre-processing (format standardization & data augmentation) and applied YOLOv5 to build new baseline models for object detection with F1 scores 10% higher than previous methods
- Maintained and developed the Python interface of Extreme Vision's online platform for the training-inference pipeline, which involves various vision-related tasks like object detection, image segmentation and behavior recognition
- Prepared and gave labs to local students to help them be familiar with deep learning techniques in a summer boot camp

Algorithm Engineer Intern in Intelligent Customer Services Team

Shenzhen, China

Tencent Holdings Ltd

Summer 2020

- Created a new Transformer-based classifier to evaluate customer service agents with the highest accuracy above 90%
- Implemented team's first multilingual customer service robot by fine-tuning pre-trained language models based on GPT
- Monitored servers' conditions and ensured GPU utility and memory were neither idle nor overloaded

Researcher in Distributed Intelligence Agents Lab

New York, NY

The Cooper Union

Summer 2018 - Summer 2020

- Created a new latency function to simulate the static model of traffic network in Python
- Proposed a new traffic routing mechanism that effectively reduces drivers' travel time and increases model stability by 30%
- Applied MATLAB and Method of Successive Averages (MSA) to obtain the theoretical optimal distribution of vehicles
- Published a research paper (1st author) on traffic coordination in Journal of Intelligent Transportation Systems ([link](#))

PROJECT WORK

NL2SQL, Natural Language Processing Research

Evanston, IL

MAGICS Lab Researcher

Spring 2022 - Now

- Managed the research to build a text-to-SQL converter upon any large-scale finance database for an AI financial adviser
- Used relation-aware self-attention & GloVe to implement a text-to-SQL model and applied Gurufocus to create databases
- Achieved an execution accuracy above 80% and submitted a paper to the Association for Computational Linguistics (ACL)

JengaBot, Senior Project

New York, NY

Software Developer

Spring 2021

- Designed and built the software of a computer vision-based, low-cost robotic arm which can accomplish a series of complex mechanical motions via object detection
- Trained and utilized a Mask-RCNN model to get a target, and determined its 2D position by color segmentation
- Reconstructed a target's 3D coordinate with triangulation, which would be imported to the control module of the arm

Cloud-KNN, Cloud Computing Project

New York, NY

Full Stack Developer

Spring 2021

- Designed and developed a KNN-based classifier that can efficiently categorize images through parallel computing
- Employed multiple EC2 instances in an AWS VPC to create a multi-node environment for the multi-thread classifier
- Stored training and uploaded files in AWS S3 buckets to manage the connection with the React frontend as well as VPC

SKILLS

- Languages: Python, C++, Java, MATLAB, SQL
- Development Environments and Tools: Unix/Linux, Git, NumPy/pandas, Tensorflow/PyTorch, Apache Maven, Spark Framework, React, MySQL/SQLite3/H2, AWS VPC/EC2/S3, Visual Studio Code, Xcode, IntelliJ
- Other Tools: OriginLab/SciDAVis, AutoCAD, SolidWorks, Wireshark