

JIANJIE LIU

Machine Learning Engineer



I am a self-driven Machine Learning Engineer with strong background in Computer Vision. I love to solve challenging problems with deep learning. I have built a self-driving (toy) car. I always aim to capture the holistic view of the problem space before jumping into the details, so I can better design the solution, troubleshoot and focus on building the necessary components. I am experienced in object-oriented programming, data-pipeline building and model training with Tensorflow and Pytorch. I believe that machine learning is the key to build a smarter world in a responsible way. On the side, I am amateur photographer specialize in street, portrait, studio and street photography.

WORK EXPERIENCES

Machine Learning Engineer

As a ML engineer in the Microsoft AI Development Acceleration Program (MAIDAP), I have valuable exposure to various machine learning stacks, and the experience to design and build AI solutions that brings great impacts to the different product domains.

- Designed and built end-to-end machine learning solution for ad personalization on Microsoft News that showed **8%** increase in ad revenue
- Created a novel open-sourced tool to generate synthetic documents that improved NER model performance by **76%** on scanned documents
- Designed and implemented CI/CD infrastructure for ML model training and deployment in a custom Spark Cluster
- Designed and built production ready data pipeline with proper monitoring

Security Software Intern

- Built a LSTM deep learning model to identify healthy and malicious network traffic with Keras
- Implemented tools in Python to aggregate 100GB of training data from Hadoop distributed file blocks
- Increased unit test coverage for multiple AngularJS applications to 99% with Jasmine.js and Ava.js

Software Engineering Intern

- Implemented an Angular application to manage mainframe storage for 50,000+ users
- Created and maintained Node.js packages for UI components shared in multiple products
- Designed RESTful API for data aggregation in Node.js

Information System Intern

- Built Docker image to package algorithms examining DNA
- Deployed AWS EC2 instances to host Docker image
- Reduced Docker size by 25% and optimized Python algorithm by 20%

PROJECTS

Self-Driving Toy Car

- Designed and assembled a Raspberry-pi controlled racing car mounted with camera and ultra sound sensor
- Trained a end-to-end deep learning model to control steering angle of the car based on live camera footage
- Implemented CNN models in [Nvida's End-to-End Learning for Self-Driving Cars](#) paper

Vehicle Detection



SKILLS

Tech

Pytho
C++/A
Tenso
Node.
Objec
Buildi
Aka
Profr
Effecti
Team
Strong
Roc
Good

EDUCATION

Brig
BS Cc
Tufts I
2015 - .

LANGUAGES

Englis
Chine
Japan

INTERESTS

Photo
Aerop
Cyclin
Travel