Ben Li

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INTERNSHIP

May 2019

Aug 2019

Software Engineering Intern

HARMAN | Infotainment x Connected Car

- Developed a **full stack Android** app with C++ binder IPC to team's **distro for cars** [AOSP, build-tools].
- Wrote a Python Library **used in 4,000+ tests** to automate Android Shell, Windows, STM32 uC, power supply, etc.
- **Automated** a **15-min manual software update** (*replaced with coffee breaks*) with Python & batch scripts.
- **Diagnosed bootup-bug** for project with China-Team, Intel & Pre-integration by writing kernel-log automated test

TEAMS

Sept 2018

Present

ADAS Software Developer

EcoCAR | Autonomous Chevrolet Blazer SUV

- **Wrote MATLAB** program to rapidly fine-tune driving algorithms in simulation without risk of real-collisions.
- **Initiated Sensor Fusion** development to optimize SUV's ability to *track* other cars for real roads [MATLAB].
- **Chosen** to present to General Motors at 2018 Austin TX Conference & obtain **Intel Mobileye** training.
- **Researching L1-autonomy** feature, *adaptive cruise control*, in Simulink based on papers

PROJECTS

Sep 2019

Jan 2019

Software Hacks

Hack The North / DeltaHacks

- **Won** at **high-profile** hackathons by blending computer science & electronics.
- **Programmed whiteboard** to draw JPG-images with **DS+A** [Python script: DFS, OpenCV, Matplotlib, networkx].
- **Painted** with **lasers** by configuring a DSLR camera with a laser-beam for precise long-exposure photography.
- **Simplified high-level DFS** by pre-processing images in a pipeline containing edge-detection, blurring, etc.
- **Enabled *rapid testing*** by writing a **tool for programming** the laser & whiteboard with new images over serial.

Aug 2019

Present

Web Dev / Deep Learning

- **Fine-tuned famous ResNet** neural network for specific Image Classification/Segmentation [Jupyter, Python].
- **Created *live-drawn*** content on top of Google Maps API by integrating Python script into **HTML personal portfolio**.
- **Visualized** temperature data on the web with Microsoft Azure as a gateway for sensors [Raspberry Pi, PowerBI].
- **Explored ML** by programming models/algorithms (e.g. CNN, gradient descent) in MATLAB from scratch

AWARDS

Finalist
Hack The North 2019:
LASER (Top 12 of 375)

3rd Place
DeltaHacks 2019:
Delta Draw

Top 15 / Wolfram Alpha
York U Hacks 2018:
Eye Tracking Servo

Best Presentation
McMaster IMPACT 2017:
Assistive Eating Device

SKILLS

Languages
Python, Java, C/C++, JavaScript, HTML

Technologies
Git, Linux, Android, ML, Azure, Google Cloud

Hardware & Other
Verilog, FPGAs, Simulink CAN, HLS, UART, Rasp Pi.

EDUCATION

McMaster University
Computer Engineering
CO-OP, Graduate: May 2021

Activities:
IEEE Computer Vice Chair,
Robomasters Vision Team,
MEC Organer (2018)

COURSES

Practical Deep Learning, fastai
Computer Vision, Udemy
Machine Learning, Coursera
Web Development, Thinkful