

BEN LI

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EXPERIENCE

Harman

Software Engineering Intern: Connected Car & Infotainment

Novi, Michigan
May 2019 - Aug 2019

[Python](#) [C++](#) [Java](#) [Android](#)

- Added APIs in Android OS to enable verification of C++ audio libraries from the device **UI**
- Developed a Java .APK app in the *Android distro's* **build system** to demo C++ audio libraries
- Designed python modules to operate a PC's linux shell, GUI, and 3 slaves (Android product, power supply, and uC) to run 4,000+ **automated tests**
- Programmed a STM32 uC to override product's board, which revealed bootup failure (freq. of $\frac{1}{1,000+}$ cycles) for **critical ticket** with China team and supplier

PROJECTS

Self-driving Car

Oct 2018 - Present

[MATLAB](#) [Simulink](#)

- Presented in US DOE's *autonomous hybrid E car challenge* (EcoCAR) on SUV's initial sensor/algorithm/computer **architecture**
- Wrote *fusion algorithm* in MATLAB for car's sensors to track objects; and **optimized** [*noise, cluster-size*] in self-made simulation program
- R&D of *adaptive cruise control* (ACC) algorithm to **control** speed, acceleration, and braking

Robotic Whiteboard

Jan 2019

[Python](#) [OpenCV](#) [NumPy](#)

- Implemented a *picture-drawing graph algorithm* for robotic-whiteboard that computes coordinates to draw user-uploaded images
- Created a deterministic Python script to **demo** project's functionality to 700 hackers

Web / ML / Cloud

Aug 2019 - Sep 2019

[GCP](#) [Azure](#) [fastAI](#) [HTML](#) [CSS](#) [JavaScript](#)

- Trained **neural networks** with cloud GPU/CPU's and PyTorch/fastAI
- Added Python turtle API to HTML **source** of [benli.design](#) to draw **sprites**
- Built cloud-hosted Azure **IOT Hub** to connect remote sensors

SKILLS

Languages: Python, C++, Java, JS/HTML/CSS, Batch
Technologies: Azure, Google Cloud, OpenCV, Bootstrap, Android Open Source Project (AOSP)
Tools: Git, Linux, LaTeX, Serial Console, ADB, Raspberry Pi

EDUCATION

McMaster University





B.Eng. Computer Engineering

Hamilton, Ontario
Sep 2017 - May 2021

IEEE McMaster

- Managing **supply chain** for ECE Department's course-kits
- Developing *Advanced Raspberry Pi* workshop for students
- **Teaching** [soldering, python, raspberry pi] to students

AWARDS

2019 	Finalist & top 11/400	Hack the North (<i>Canada's biggest hackathon</i>)
2019 	3 rd /200 & <i>Forge Technology</i> Award	DeltaHacks V (<i>MLH, McMaster</i>)
2018 	Wolfram Alpha Sponsor Award	York U Hacks
2017 	Top 2% in Engineering Class of 2021	IMPACT (<i>McMaster</i>)