

WORK EXPERIENCE



TOMORROW LAB, NY

Electrical Design Engineer

Jun 2021 - Now

- Design, develop, and build electrical systems and its dedicated firmware, for both low volume prototypes and mass produced consumer products.
- Core tools and technologies includes: EE lab equipment, Autodesk Eagle/Fusion, STM32, nRF52, AVR, Segger, VSCode, C and C++, Git, and more.
- Manage eBOM — select, source, and procure standard and custom components, to eventually work with PCBA vendors to get turnkey PCBs manufactured.
- Successfully delivered 1 patented prototype, 1 pilot product and 1 mass produced product, for clients such as IMAX, Nerf, and Citizen, and other early stage startups. Specifically worked closely with clients' software engineering team for BLE mobile app integration.
- Work closely with a multi-disciplinary team of engineers and designers, to integrate the electronics, mechanical, and design efforts into one solid product.
- Featured in "Potentially Genius", a reality show on YouTube in partnership with DigiKey, about turning "potentially genius ideas" proposed by guests into working prototypes.



NEW YORK UNIVERSITY, NY

Graduate Assistant (OK Robot Reboot)

Jan - May 2021

- An undergraduate course centers around the interaction between human and **AI, voice interfaces, machine vision, and robotics**. Assisted Prof. Pedro Oliveira in teaching and preparing teaching materials related to **Raspberry Pi, OpenMV, IBM Watson, SSML, Python, Node.js**, etc.



SOUTH CHINA MORNING POST, HK

Salesforce Developer

Oct 2018 - Aug 2019

- Successfully retired and integrated two legacy sales systems within the designated 9-month timeframe by developing a Salesforce **SalesCloud** system in coordination with system vendor, using **Apex, SOQL, HTML, Javascript, SLDS**



CCCDI LTD., HK

Intern Developer

May 2017 - July 2017

- Developed 3 **AR** apps, with interactive data visualization capabilities, in **C# with Vuforia on Unity3D**

AWARDS AND ACHIEVEMENTS



MIT ENTREPRENEURSHIP & MAKER SKILLS INTEGRATOR

Champion, Engineer, Design Lead

Jan - Feb 2018

- Recognised for best product and business idea in this 2-week hardware startup bootcamp where 5 teams of bright young entrepreneurs competed. Demoed prototype and presented GTM strategy to prominent VCs
- Prototyped "Tagit", a smart countertop device that alleviates food spoilage, using Arduino and 3D printing, and developed proprietary Bluetooth Android app



DISNEY IMAGINATION DESIGN COMPETITION

Finalist, Team Leader

Oct - Nov 2016

- Led finest team and designed a "public open space" based on Disney design principles and IP, with Unity3D and physical models

EDUCATION

NEW YORK UNIVERSITY

Sep 2019 - May 2021

MPS, Interactive Telecommunications (ITP)
4.0 GPA, Tisch Scholarship, Red Burns Scholarship

CITY UNIVERSITY OF HONG KONG

Sep 2014 - May 2018

BSc, Creative Media
Valedictorian, Dean's List

SKILLS

ELECTRICAL ENGINEERING

STM32, BLE(nRF52), C/C++

PCB schematic & layout design (Eagle/Fusion 360)

Low power circuit design & optimization

Components sourcing, PCBA ordering

Manual PCB assembly, reflow, soldering

EE Lab equipment (bench power supply,

multimeter, oscilloscope, microscope)

NFC (antenna, energy harvesting)

I2C, RTC, Arduino, Raspberry Pi

HARDWARE PROTOTYPING

Fusion 360, FDM & SLA 3D Printing,
Machine Shop tools, CMF

SOFTWARE DEV

Salesforce, MERN Stack, Socket.io

JAVA, C#, Python, SQL

Git, Linux

SOFTWARE DESIGN

UX Design (Figma), Adobe CC

EMERGING TECH

TensorFlow, VR/AR (Oculus, Unity3D)

PROJECTS

BankHeist

2021

Devised an IoT solution for signing physical documents remotely and securely over the internet in real-time.

IoT, Socket.io, Express.js, Crypto.js, Electron.js,
Serialport.io

jasontsemf.github.io/bankheist.html

OptiMice

2019 - 2021

Devised a novel online tailoring experience which offers bespoke computer mice to pro computer users.

Photogrammetry, AI, 3D Printing, BLE, Eagle(cutsom library, programmatic board outline), MERN

jasontsemf.github.io/optimice.html