

JERIANN HSIAO

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EXPERIENCE

Junior Process Engineer Jan - Apr 2020

OTI Lumionics | OLED Materials Discovery Company

- Analyzed data from profilometry, thickness mapping, and lifetime performance tests of **5,000** OLED devices to report optimal deposition processes and recipes to process team
- Troubleshooted OLED encapsulation process by designing and performing experiments and identified a solution which decreased shorting by **50%** during mass production
- Operated and maintained an OLED manufacturing line in ISO Class 2 and 3 cleanrooms and documented protocol in an **80-page** onboarding package for future interns

Lab and Design Team Lead Dec 2019 - Present

Waterloo iGEM | Undergraduate Research Team

- Co-directed and managed a cross-disciplinary synthetic biology design team composed of **40** members to drive project research and design of our metal waste treatment and recovery system

Materials Science Research Assistant Apr - Aug 2019

Voltera | 3D-Printing Circuit Board Company

- Optimized the printing and curing profiles of **20** conductive inks by investigating thermal, mechanical, rheological, and cure rate properties to ensure smooth and efficient hardware prototyping
- Created equipment specifications and evaluated suppliers for a flexible electronic prototyping workflow with the materials, software, and hardware teams
- Trained full-time replacement by writing SOPs and teaching key mechanical and materials science concepts

EDUCATION

Nanotechnology Engineering Sept 2018 - Apr 2023

University of Waterloo | BAsC Candidate

- Seeking a 4 or 8-month co-op starting Fall 2020
- GPA 3.7, Dean's Honour's List (Fall 2018, Winter 2019)
- Courses: Semiconductors, Python, MATLAB, SolidWorks

PROJECTS

Stop Slacking (EngHack)

- ★ Best Automation Hack with UiPath
- Built a Slack app for students using JavaScript to generate quizzes and to-do lists with a PDF-reader bot

ComPEAR (ElleHacks)

- ★ Best Use of VoiceFlow
- Made Amazon Alexa into a supportive exercise trainer that corrected the user's posture with TensorFlow's PoseNet model

BakeDem (Hack4Health)

- ★ Best Problem Solution Award
- Interviewed people with dementia to create a collaborative cooking app that captures their favourite recipes and memories

ICETY (MakeUofT)

- Prototyped a road salt dispenser that released the optimal amount based on computer vision and temperature data
- Programmed a GPS-guide messaging bot that informs users if their route is safe using Twilio and the HERE Maps API

EXTRACURRICULARS

Women in STEM Mentor

- Organized a coding conference for **20** students at high school to teach them AWS, SQL, and JavaScript
- Advised over **200** high school girls as a Waterloo Engineering ambassador and Women in Engineering leader

Vimy Foundation Ambassador

- **1 of 20** Canadian students awarded with a WWI educational program in Europe for demonstrating outstanding civic service
- Advocated for greater historical education for youth to **500** students, veterans, and community members