# OLIVIA Y. LEE

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## EDUCATION

**Stanford University** — **Palo Alto, CA**

*B.S. Symbolic Systems (Learning). Minor: Mathematics – GPA: 4.08/4.0* — Sep 2020 – Jun 2024

- Select Coursework: Computer Science, Mathematics, Philosophy, Psychology, Linguistics, Design
  - CS: CS106B Prog. Abstractions, CS107 Computer Org. & Systems, CS110 Principles of Computer Systems, CS103 Discrete Math for CS, CS109 Probability for CS, CS161 Algorithm Analysis & Design, CS221 Intro. to AI, CS229 Machine Learning
  - Math: MATH51 Lin. Alg./Multivar. Calc., MATH52 Multivar. Integral Calc., MATH104 Matrix Theory, CS205L Math for ML
  - Other: PSYCH240A Curiosity in AI, SYMSYS205 Philosophy of Perception, PHIL20N Philosophy of AI, PHIL151 Metalogic
  - Stanford in Oxford: Tutorial in Graph Representation Learning, Directed Reading in Philosophy of Mind (Fall 2022)

**Raffles Institution (Junior College)** — **Singapore**

*Singapore-Cambridge General Certificate of Education A-Level – 90/90 Rank Points, 8 Distinctions* — Jan 2018 – Dec 2019

- Honor Roll. Raffles Science Institute, Tech-Entrepreneurship Club, AI Ethics Conference Organizer, Tennis Team Captain.
- A*STAR Science Research Award (Secondary & Junior College) – selected as one of ~80 students nationwide.

## RESEARCH EXPERIENCE

**Stanford Artificial Intelligence Laboratory – IRIS Lab** | *Research Engineer* — **Mar 2021 – Present**

- Conducted reinforcement learning research for multimodal robot learning using vision, audio, and memory. *Site: bit.ly/3OnSZoI*
- Paper accepted to Robotics: Science and Systems 2022, a top robotics conference with 30% acceptance rate. *arxiv.org/abs/2205.14850*
- Established novel robotic imitation learning architecture processing expert demonstrations collected using Oculus VR headset.
- Selected as 1 of 17 CURIS Fellows, Stanford's Computer Science summer research program for undergraduates.

**Salesforce** | *Full-Stack Software Engineer* — **May 2022 – Aug 2022**

- Contributing to Flow Builder, a low-code tool for building, managing, and running automated end-to-end enterprise workflows.
- Enhancing user customization tools in Flow Builder using **React, Typescript,** and **HTML/CSS** by shipping production-ready code.
- Collaborating with engineers, product managers, and UI team to iterate on these features for September 2022 product release.

**Entropica Labs Pte. Ltd.** | *Technical Business Strategist* — **Apr 2020 – Dec 2020**

- Conducted market research of nascent quantum computing industry, comprising >150 software/hardware companies worldwide.
- Established post-COVID-19 long-term business strategy and business model based on competitor and risk analysis.
- Prepared for targeted ~$20M Series A financing, by researching and establishing connections with >30 potential investors.

**Center for Quantum Technologies** | *Research Intern* — **Aug 2018 – Sep 2019**

- First author of analysis discussing use of satellites to distribute private keys for quantum cryptography. *arxiv.org/abs/1909.13061*
- Researched quantum computing theory and algorithms, by conducting literature reviews of ~25 papers with postgraduates.

## PROJECTS

**PSYCH 240A: Curiosity in AI Final Project** — **Mar 2022 – Jun 2022**

- Proposed Model Predictive Curiosity (MPCu), backpropagates on predicted curiosity value to select curiosity-maximizing actions.
- Tested MPCu's capability to optimize for high-curiosity action values and enrich multi-object interactions in Box2D environment.

**CS 229: Machine Learning Final Project** — **Mar 2022 – Jun 2022**

- Modeled improved zero-shot and few-shot transfer learning with self-supervised models for sentiment classification.
- Engaged in comparative testing of direct tuning, zero-, and few-shot capabilities of logistic regression models (with validation), long-short-term memory (LSTM) networks with frozen and trainable word2vec embeddings, and DistilBERT using **Python**.

**Virtual Cloning Application for Conversational Grief Therapy** — **Jun 2020 – Sep 2020**

- Participant in Stanford Hacking 4 Recovery Accelerator and R42 Institute AI Summer Fellows Program. *memlove.me*
- Integrated state-of-the-art image/voice synthesis and emotion recognition APIs (e.g. GPT-3, Resemble.ai) *Pitch: bit.ly/3a7Ejb5*

**Automatic Speech Recognition (ASR) for Indoor Navigation** — **Apr 2018 – Mar 2019**

- ASR app trained to understand Singaporean accent/terms for supermarket navigation. >100 downloads to date. *Pitch: bit.ly/3gJvzdv*
- Compared performance of statistical NLP models on query analysis and recommendation quality. *Github: SG-ASR-App*

## ACTIVITIES & LEADERSHIP

**CS + Social Good** | *Fellowships (Team Lead, Executive Board)* — **Jul 2021 – Jun 2022**

- Secured $25,000 in funding to support full-time student summer projects in tech and social impact organizations. *cs4good.com*

**Women in Computer Science (WiCS)** | *Outreach (Volunteer)* — **Sep 2020 – Nov 2020**

- Developed curriculum teaching core CS principles to low-income, underrepresented students in STEM. *web.stanford.edu/group/wics*

## SKILLS

**Language Proficiency**: Native English and Mandarin speaker
**Programming**: Python, Tensorflow, PyTorch, OpenCV, Robot Operating System, C++, C, JavaScript, HTML/CSS, R
**Work Eligibility**: Eligible to work in the U.S. with no restrictions.