# Pinlin [Calvin] Xu

pinlinxu@stanford.edu | linkedin.com/in/pinlin-xu | pinlinxu.com | github.com/Calvin-Xu | KN6YCY (Radio)

## **EDUCATION**

#### Stanford University

Stanford, CA

B.S. Computer Science (AI Track), Minor in Statistics | GPA 3.919

September 2022 - June 2026

#### EXPERIENCE

## Full Stack Engineer Intern

Sep 2024 -

Ideaflow Inc.

Palo Alto, CA

• Incoming intern to work on web (Next.js, React) and iOS apps, semantic knowledge graph, product engineering

# Undergraduate Research Fellow (machine learning, causal inference)

Jan 2024 – Aug 2024

Stanford Management Science and Engineering, Syrgkanis Lab

Stanford, CA

- Researched LLM-powered causal graph discovery applied to genetic perturbation prediction
- Augmented generative genetic model with PubMed-derived causal graph using GPT-4, Neo4j graph database
- Initiated collaboration with PaperToGraph project at Ideaflow Inc; deployed experiments to SOAL GPU cluster

## LLM AI Integration Project Lead

Jun 2023 – Sep 2023

JuniorKids Group / Le Groupe JuniorKids

Montreal, QC

- Led intern team of 7 building LLM-powered applications improving Shopify storefront performance
- Automated marketing changes with OpenAI, Google Analytics, and Shopify's Product GraphQL APIs
- Contributed to traffic growth through August for the first time and 37% YoY growth
- Managed project on Notion and Github, organized meetings, and regularly sent updates and memos

## Student App Developer

Sep 2017 – May 2018

Avon Old Farms School

Avon, CT

- Co-developed a full-stack attendance tracking application that quickly scans student RFID cards
- Contributed to frontend deployed on tablets using Vue.js and Electron; backend using SpringBoot, MySQL, Docker
- Replaced faculty's pencil-and-clipboard workflow in the freezing dark through User-Oriented Collaborative Design

# Skills & Coursework

 $C,\ C++,\ Python,\ Java\ /\ Kotlin,\ JavaScript\ //\ web\ dev,\ Swift\ //\ iOS,\ Emacs,\ Git,\ CI/CD,\ DevOps$ 

Machine Learning (CS229), Deep Learning, NLP (CS224N), Linear Algebra, Vector Calculus, Numerical Methods (CS205L), Systems from the Ground Up (CS107E), Operating Systems, Algorithm & Data Structures

#### Projects

## FLFL: Grounded Japanese Furigana Generation using Aligned Whisper Transcription

July 2024

• Evaluated and released finetuned model, datasets, & codebase for processing 20+ GB of public-domain audiobook data released by the Japanese National Diet Library | HuggingFace Trainer, axolotl, wandb, Modal.com

## The Shades of Meaning: LLMs' Cross-lingual Representation of Grounded Structures

June 2024

• Led an outstanding CS 224N custom project poster and report | Python, PyTorch, transformers

Predicting Hospital Length of Stay from Imbalanced Data | Python, scikit-learn, XGBoost

March 2024

• Built and presented a strong classification-regression pipeline using synthetic oversampling, ensemble learning

#### Allegorical Lisp Machine | C, Lisp, ARMv6 Assembly

March 2023

- Built a freestanding graphical Lisp environment on Raspberry Pi A+
- Implemented Lisp interpreter, system calls, exception handling, REPL, etc. from relevant papers
- Implemented memory allocation, bitmapped graphics, serial IO, math library, etc. in baremetal C
- Wrote specifications, tracked progress, and assigned tasks as co-dev and project manager

## Hikari Ray Tracer | Typed Racket, RackUnit

August 2022

• Implemented The Ray Tracer Challenge in functional Typed Racket (Scheme, Lisp dialect)

## Flow Browser | Swift UI, UIKit, WKWeb View

August 2019

- Designed and built a tree-style tab browser for iOS & iPadOS
- Utilized native APIs to enable features such as iCloud sync, adblocker, drag and drop & multiwindow interactions