

# Pinlin [Calvin] Xu

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## EDUCATION

### Stanford University

Stanford, CA

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

September 2022 – June 2026

additional background in Classics (Latin), East Asia studies (Chinese, Japanese); VP of Stanford Kendo

## 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 automating marketing and admin workflows with OpenAI, Shopify's 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, TypeScript: web, 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*

### 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

### 7GUIs with React + TypeScript + MobX | React, TypeScript, MobX, Node.js

August 2024

- Implemented the 7GUIs challenge accurately using reactive state management and value derivation
- Topics include concurrency, constraints, responsiveness, bidirectional data flow, undo/redo, custom drawing

### Hikari Ray Tracer | Typed Racket, RackUnit

August 2022

- Implemented *The Ray Tracer Challenge* in functional Typed Racket (PLT Scheme, Lisp dialect)

### Flow Browser | SwiftUI, UIKit, WKWebView

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

## WRITINGS & PUBLICATIONS

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- Delere imperium* and *animi imperio*: the semantics of *imperium* in *Cic.Cat.* and *Sall.Cat.* | *Latin Philology* 2021
- Rediscovering 1657: A New Partial Translation & Commentary on *De Ratiociniis in Ludo Aleae* | *Latin, Science* 2023