

# Steven Arellano

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## EDUCATION

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### The University of Chicago

*MS in Computer Science*

**Chicago, IL**

*Expected 2025*

### The University of Chicago

*BA in Computer Science and BA in Economics Spec. Business*

**Chicago, IL**

*Expected 2025*

- Relevant Coursework: Operating Systems, Math Foundations for ML, Time Series Analysis and Stochastic Processes, Data Intensive Computer Systems (PhD), Algorithmic Game Theory (PhD)
- GPA: 3.53

## WORK & RESEARCH EXPERIENCE

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### University of Chicago Department of Computer Science (*Actuated Experience Lab*)

*Researcher*

**Chicago, IL**

*March 2024 - Present*

- Improved performance for LLM robot control by 32% through advanced prompting and PyTorch fine-tuning
- Developed a web application for users to enter movement and shape requests for a multi-robotic system

### Google (*Spanner Database Team*)

*Software Engineering Intern*

**Cambridge, MA**

*August 2024 - October 2024*

- Increased named schema testing speed by 95% by implementing the feature in a database emulator in C++
- Increased user-defined function testing speed by 95% by implementing the feature in a database emulator in C++

### Two Sigma (*Network Software Engineering Team*)

*Software Engineering Intern*

**New York, NY**

*May 2024 - August 2024*

- Built a data center visualization app providing analytics such as device count, temperature, and power use using React
- Enhanced parallel processing efficiency in an inventory service by migrating the backend from Python to Go
- Developed 5+ gRPC endpoints using Go to provide device data and data visualization support

### Google (*Gemini AI Team*)

*Software Engineering Intern*

**New York, NY**

*April 2023 - July 2023*

- Designed a framework for using LLMs as evaluators on language model task completion and user interactions
- Optimized LLM task performance by 66.21% through experimenting with advanced prompt tuning in Google Colab
- Created 5+ UI components utilizing Angular to call the backend using gRPC and enable client interaction with LLMs
- Developed 9+ gRPC endpoints on the backend utilizing C++ and Python to call LLMs and modify a Spanner database

### Digi Divers

*Founding Engineer*

**Chicago, IL**

*February 2023 - April 2023*

- Awarded \$20,000 at a global hackathon comprised of 10,000+ participants for creating an AI data annotation app
- Developed the data uploading app and data annotation game using React, React Native, Express.js, and PostgreSQL

### Sei Labs (*Vortex Team*)

*Software Engineer*

**San Francisco, CA**

*April 2022 - July 2022*

- Integrated 2+ cryptocurrency wallets into the platform Vortex to create a derivatives trading experience
- Built a Typescript SDK with 20+ functions to make gRPC calls and send messages to the Cosmos' blockchain Sei
- Developed the Falcon Wallet Chrome extension and mobile app used by 1000+ users with React and React Native

## PAPERS & TALKS

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- Paper: *Shape n' Swarm: Manipulation-Aware Generative Actuation with Swarm UI and LLMs*, CHI 2025 (under review)
- Lightning Talk: *A Primer On Initialization*, CppCon 2024

## SKILLS

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**Programming Languages:** Python, JavaScript/TypeScript, C/C++, Go

**Frameworks and Tools:** Flask, React, Angular, React Native, Node.js, PostgreSQL, PyTorch

**Interests:** Neuroscience, Powerlifting, Poker, Real Estate Development, Green Bay Packers