

# KRIS SOWATTANANGKUL

☎ 323-672-6181 ✉ [ksowatta@uci.edu](mailto:ksowatta@uci.edu) 🌐 [krissowat.com](http://krissowat.com) 🌐 [/in/krissowat](https://in.krissowat) 🌐 [/krissowat](https://krissowat)

## Education

University of California, Irvine

Expected June 2025

Bachelor of Science in Computer Science – 3.8 GPA

Irvine, CA

## Relevant Coursework

- Object-Oriented Programming
- Database Management (SQL)
- Implementation of Data Structures
- Machine Learning & Data Mining
- Analysis & Design of Algorithms
- Computer Organization (Assembly)

## Experience

Research Software Engineer Intern

June 2023 – August 2023

Princeton University

Princeton, NJ

- Developed ASPIRE, a computational CryoEM image processing framework for particle reconstruction pipelines
- Parameterized 30% of **Continuous Integration** GitHub Actions test suite and reconstruction algorithm by using pytest fixtures and unit tests to test code during development and deployment.
- Optimized simulation processing performance in distributed computations by 40% by implementing image bandpass metrics and leveraging caching (dynamic calculation)
- Created and automated CryoEM micrograph simulations, used by 10+ researchers from MIT, Princeton, and Tel Aviv
- Wrote public-facing, open source API documentation, docstrings, and tutorials by generating HTML with Sphinx

Frontend Developer and Graphic Designer

February 2023 – June 2023

UC Irvine Transportation & Distribution Services

Irvine, CA

- Developed, designed, and maintained official UCI Bike website ([bike.uci.edu](http://bike.uci.edu)) with HTML, CSS, and WordPress
- Increased engagement by 30% among 35,000 students by creating graphics and maps with Adobe Photoshop/Illustrator
- Implemented customer research data in design of digital, physical, and vehicle graphics, driving website traffic by 15%.
- Created graphics for different resolutions to increase accessibility across newsletters, social media, and campus displays

Data Engineer Intern

June 2022 – August 2022

Arlite

Los Angeles, CA

- Developed and improved data visualization software that utilized ML Engineers' models and parameters to create an interface for clients to input their own data to predict growth trends
- Increased file upload speed and stability by 30% by serializing user CSV files with pickle
- Optimized feature selection and fit of engineers' models by 12% by implementing L1/L2 regularization and dropout
- Worked in an Agile environment, participating in daily stand-up meetings and bi-weekly sprint planning sessions.

## Projects

Mitski Lyrics Twitter Bot | Python, JavaScript, AWS Glue, RESTful APIs

January 2023

- Developed a bot to analyze lyrical tweets and respond with song title using the Twitter and Genius APIs.
- Amassed ~3 followers per day with 50-100 impressions per song tweet.
- Automated and scheduled tweets by implementing cron expressions (Unix utility) through AWS Glue.
- Deployed script on Raspberry Pi running DebianOS, reducing automation costs by 100% and automation speed by 80%.

Thai Spot Cultural Website | JavaScript, React, HTML, CSS, Python, PostgreSQL, RESTful APIs September 2022

- Designed a website that allows users to search for Thai restaurants/places (Thai community's Yelp) with React.
- Integrated Google Maps API and Leaflet to display 10,000 Thai locations with informational markers and achieved 93% accuracy in location search through asynchronous Fetch API queries.
- Scraped and indexed 5,000 restaurants from 7 online directories using a BeautifulSoup script
- Sped up location query fetch times by 40% by implementing a PostgreSQL database and efficient database schema

## Skills

**Languages:** C/C++, Python, JavaScript, HTML/CSS, Java, MySQL, MongoDB, MATLAB

**Frameworks & Tools:** React, scikit-learn, PyTorch, TensorFlow, Google Test (gtest), pytest, REST, SQLite

**Technologies:** Linux, Git, AWS, GitHub Actions, Jira, IntelliJ, Figma, Emacs

## Extracurricular

- UCI Dragon Boat: race team member, won 1st place for open division and also placed into A-division semis
- Thai Cultural Association: lead acting role (male lead) in annual play, performed to 100+ audience members
- Pickleball: held and competed in local tournaments, coached 20+ players at local park, featured on Thai television
- ICS Student Council: spearheaded group projects and mentored students through resume workshops and interview prep