KRIS SOWATTANANGKUL

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Education

University of California, Irvine   **Expected June 2025**
Bachelor of Science in Computer Science – 3.8 GPA   *Irvine, CA*
- Object-Oriented Programming
- Implementation of Data Structures
- Analysis & Design of Algorithms
- Database Management (SQL)
- Machine Learning & Data Mining
- Computer Organization (Assembly)

Skills

Languages: C/C++, Python, JavaScript, HTML/CSS, Java, SQL, MATLAB
Frameworks & Tools: React, scikit-learn, PyTorch, TensorFlow, Google Test (gtest), pytest, MySQL, MongoDB
Technologies: Linux, Git, AWS, GitHub Actions, Jira, RESTful API, IntelliJ, Figma, Emacs

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 50% of Continuous Integration GitHub Actions test stuite and reconstruction algorithm by migrating unit tests to pytest fixtures and implementing regex matching 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) 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*
- 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*
- 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 Beautiful Soup script
- Sped up location query fetch times by 40% by implementing a PostgreSQL database and efficient database schema

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