

Yoto Kim

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EDUCATION

University of California, San Diego

Bachelor of Science in Mathematics-Computer Science, Minor in Cognitive Science

GPA: 3.96/4.00 — Provost's Honors

Courses: Data Structures, Algorithms, Systems Programming, Software Tools and Techniques, Computational Theory, Computer Science Research, Data Science, Discrete Math, Linear Algebra, Statistics

La Jolla, CA

Sep 2022 – Jun 2026

EXPERIENCE

Center for Energy Research – Software Development Intern

JavaScript, TypeScript, React Native, PostgreSQL, Express, Node.js, D3.js, CSS, GitHub

May 2024 – Present

La Jolla, CA

- Engineered an iOS app featuring interactive data visualizations and educational models on renewable energy
- Designed a PostgreSQL database schema to manage projected data for **5 renewable energy sources** across **10 regions** over the next **10 years**, utilizing SQL queries to ensure efficient data processing
- Built a Bottom Sheet displaying **5 renewable energy sources** for all **10 global regions** when selected on a map, implementing sliders that allow users to change the values and visualize the effects of the changes

IBM – Software Fellow - IBM Accelerate

JavaScript, React, React Testing Library, CSS, Express, Material UI, GitHub

Jun 2024 – Jul 2024

Remote

- Selected as **1 of 150 from over 10,000** applicants to complete weekly lectures, labs, and quizzes on full-stack development, testing, and the software development cycle under IBM engineers and experts
- Developed a React to-do web application using Material UI for styling, utilizing an Express server for backend, and implemented REST APIs for CRUD operations

Knight Lab – Machine Learning Researcher

Linux, Python, TensorFlow, Pandas, NumPy, Matplotlib, Seaborn

Sep 2023 – Jun 2024

La Jolla, CA

- Fine-tuned an attention-based neural network with **over 7,000** gut microbiome samples to predict an individual's diet given their microbiome profile
- Achieved a **20x lower** Mean Squared Error in predicting an individual's Total Dietary Fiber intake compared to the state-of-the-art Random Forest model
- Led model training sessions, tuning hyperparameters at each session, and wrote Python scripts to visualize performance through scatterplots and PCoA plots

Juni Learning – Computer Science Instructor

Python, Java

May 2023 – May 2024

Remote

- Conducted one-on-one programming classes for **10 students** aged 12-18 in Python and Java
- Taught topics ranging from syntax and object-oriented programming principles (objects, classes, methods) to sorting algorithms, data structures, and time complexity
- Refined existing curriculum with tailored custom projects and assignments, resulting in improved learning pace and student engagement

PROJECTS

Patriots and Paws | *TypeScript, MongoDB, Express.js, Node.js, React, MaterialUI, Next.js*

Jan 2024 – Jun 2024

- Collaborated within a team of 7 developers to create a furniture item request interface for Patriots and Paws, a nonprofit that has **helped over 14,000 families** receive **over \$11.5 million** in household items
- Constructed a MongoDB model for item requests and the API route for request submissions and edits using Express, applying validation rules for all fields
- Implemented frontend of item request forms, inventory updates, and form edits, building custom reusable React components (text field, multiple choice, drop down) and managing validation and submission with React Hook Form

Demiya Website | *JavaScript, React, Next.js, CSS, Git*

May 2023 – Aug 2023

- Created a restaurant website serving **300+** users daily from three locations
- Leveraged Google Lighthouse to identify areas of improvement, enhancing overall website performance by **50%**, accelerating speed index **sixfold**, and boosting search engine optimization by **15%**
- Devised a responsive and easy-to-navigate user interface to fit any screen size and embedded all restaurant location frames using Google Maps API

SKILLS

Languages: Python, Java, C, C++, JavaScript, TypeScript, SQL, HTML5, CSS, MATLAB

Libraries & Frameworks: React, Node.js, Express, Next.js, Pandas, NumPy, TensorFlow

Tools: Git, GitHub, GraphQL, Docker, Linux, Visual Studio Code, LaTeX

Databases: MongoDB, PostgreSQL