

MATTHEW SUN

BACHELOR'S, COMPUTER SCIENCE



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Los Angeles, CA

SKILLS

- Java, Python, SQL, MATLAB, C, C++, C#, R, Prolog, JavaScript, LISP, HTML, CSS, Node.js, PostgreSQL
- RISC-V, Verilog
- RESTful API, Agile and Scrum Methodology
- TensorFlow/Keras, Pytorch (CUDA)
- COMSOL, Office Productivity Suite
- Oracle Cloud, Google Vertex, IBM Watson
- Unity, Unreal Engine
- Data Collection and Analysis - ANOVA, t-testing, p-testing, A-B testing - Pandas
- Modeling and Simulation - AutoCAD, Autodesk Inventor
- Linux, Unix, WSL 2.0

EDUCATION

Bachelor's Computer Science

UC Berkeley

2020-2024

AWARDS

Mu Alpha Theta (National Math Honor Society)
Outstanding Member

Science National Honor Society Outstanding Member

Small-Boat Sailing
Instructor Level 1

Scouts BSA, 2020: Eagle Scout Award

LANGUAGES

English, Mandarin, Japanese

PROFILE

Motivated UC Berkeley Computer Science graduate with a strong foundation in software engineering, data analysis, and AI technology. Proven ability to learn quickly and apply skills to real-world problems. Experienced in developing robust solutions using Python, JavaScript, and SQL. A collaborative team player with excellent communication skills, committed to driving team and company success while continuously expanding technical expertise and professional growth.

WORK EXPERIENCE

Research and Development Data Analyst

2022-2023

Efficient Power Conversion

- Wrote MATLAB code to filter and process electrical and thermal testing data into human-readable results
- Thorough familiarity with the Office Productivity Suite (Word, Excel, PowerPoint)
- Worked with simulation software (COMSOL) and organized collected data
- Collaborated with experienced coworkers to collect and analyze graphical and numerical testing data, resulting in tangible business outcomes
- Presented final research analyses and conclusions to the Product Reliability Department and CEO/Management, made multiple written reports

Sailing Coach

2019-2020

Cabrillo Beach Yacht Club (Youth Sailing Foundation)

- Coordinated youth sailing camp and activities
- Provided sailing instruction courses and coached youth members
- Supervised junior members/staff and oversaw day-to-day operation routines
- Performed facility inspections to ensure compliance with safety regulations

NOTABLE ACADEMIC PROJECTS

Rasterizer | Mesh Editor | Custom Shaders | Cloth Simulator - [Link](#)

- Made in C++
- Rasterization, image filters, color-sampling, mesh editor, Bezier curves, triangular mesh
- Raytracing, bounding volume hierarchy
- Custom shaders - reflections, refractions, surface diffusion, microfacets
- Cloth simulations, bump mapping, displacement mapping, mirror textures

UI/UX Design and Development | Responsive Design | API - [Link](#)

- Made in HTML, CSS, JavaScript
- Flexbox, Bootstrap, Node.js, Dynamic population of webpages

Rudimentary OCR (optical character recognition) AI/ML model

- Made in Python
- Implemented a binary perceptron, neural networks, and non-linear regression

Horror-exploration game with puzzle-solving elements - [Link](#)

- Made using C# in Unity 3, planned with Git/Notion
- Implemented basic mechanics of movement, brainstormed design ideas
- Cooperated with level designer, implementing environmental elements

Word-by-word language classification model

- Made in Python, alone
- Able to classify a passage of text into a set of languages
- Implemented a recursive neural network

SLNG: a web-app for slang translation (work-in-progress) - [Link](#)

- Made in HTML, CSS, JavaScript with API calls
- "Translates" American slang to more commonly used prose
- Won Spring 2024 award for "Best Use of AI"