Matthew Sun

University of California - Berkeley | Bachelor of Arts, Computer Science

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Skills

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

Education

UC Berkeley
Bachelor of Arts
Computer Science

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 Corporation

- Wrote MATLAB code to filter and process electrical and thermal testing data into actionable 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

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 Puzzle Game - 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”