Matthew Vilaysack

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EDUCATION

B.S. Computer Science | Artificial Intelligence Specialization   Stanford, CA | June 2025
STANFORD UNIVERSITY
Coursework: Computer Organization Systems (CS 107); Mathematical Foundations of Computing (CS 103); Programming Abstractions (CS 106B);Differential Equations (Math 53); Linear Algebra and Multivariable Calculus (Math 51); Great Ideas in Graphics (CS 44N).

Dual Enrollment | Dean's List   Minneapolis, MN | June 2020
UNIVERSITY OF MINNESOTA
Coursework: Introduction to Algorithms and Data Structures (CSCI 1933), Introduction to Computing and Programming Concepts (CSCI 1133), Computational Linear Algebra (CSCI 2033), Calculus II.

WORK EXPERIENCE

TATA DIGITAL | SOFTWARE ENGINEER INTERN   Santa Clara, CA | May 2022 – September 2022

- Implemented an accurate machine learning model to solve the PDF to text extraction problem using **python** for image classification, object detection, and text extraction from printed PDFs
- Deployed a custom API on **FastAPI** for PDF to text extraction that allowed users to submit photo identification and extract demanded information from the document.
- Devised and deployed the infrastructure in TypeScript through **Microsoft Azure**, then created efficient algorithms to process data from a custom **API**, to be uploaded onto a chatbot with thousands of users.

STANFORD A3C | FRESHMAN INTERN   Stanford, CA | September 2021 - Present

- · Representative for the Asian American Community at Stanford University, creating a welcoming place for students who identify as Asian and Pacific Islander through hosting community events such as guest talks and counseling

PROJECTS

ANIMELIST - ANIME TRACKER ↗   JAVASCRIPT, REACT/REDUX

- Intuitive web application used as a tool to find, track, and save anime to a list
- Extracts anime data from the **JikanJS API** database for client side management
- Created with **React/Redux** and **React-Router**. Available at https://github.com/matthewvilaysack/Animelist

MEALPREP ↗   HTML/CSS, JAVASCRIPT

- A **CRUD** web application I used during high school that makes meal preparation easy and recipes unforgettable.
- Implemented using basic array structures to cache recipes and ingredients into localStorage
- Applied HTML, CSS, and Javascript fundamentals learned from courses on Udemy

WHATSAPP CLONE ↗   REACT/REDUX, FIREBASE, SASS

- A web chat application based on WhatsApp, which supports **Google Authentication**
- React/Redux client management panel which uses **Firebase** for authentication and Firestore for storing data
- Implemented **SASS, React-Router, Babel, ES6, Webpack,** and **Node.js** for development

HEAP ALLOCATOR, COMPUTER ORGANIZATION AND SYSTEMS ↗   C

- Implemented custom explicit and implicit heaps to perform better than the standard heap using malloc, realloc, free, and delete functions in C

SKILLS

Languages: Java, C++, Python, C, JavaScript
Web Development: React, TypeScript, HTML/CSS/SCSS, Firebase,
Technology: Git, Azure, Docker, LaTeX, MongoDB, Express, NodeJS

ADDITIONAL INFO

Certifications: Advanced SASS/CSS and Modern Javascript Certifications - Udemy