

ANDY CHEN

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EDUCATION

University of California, Berkeley

Expected May 2025

Bachelor's Degree in Computer Science & Data Science

Berkeley, CA

- **GPA:** 3.92/4.0
- **Relevant Coursework:** Data Structures, Efficient Algorithms, Artificial Intelligence, Machine Learning, Operating Systems, Database Systems, Computer Architecture, Mobile & Web App Development, Principles of Data Science, Discrete Math & Probability Theory, Linear Algebra & Differential Equations, Technical Engineering Design

Thomas Jefferson High School for Science and Technology (TJHSST)

August 2017 - June 2021

Jefferson Diploma

Alexandria, VA

- **GPA:** 4.0/4.0

TECHNICAL SKILLS

Languages: Python, Java, C/C++, HTML/CSS, Javascript, PHP, SQL, Julia, GraphQL, \LaTeX , Regex

Frameworks: Node.js, React/React Native, Flask, Django, Firebase, MongoDB, REST API

Developer Tools: Git, Linux/UNIX, RedHat Openshift, Docker, Kubernetes, Agile, Unit Testing, VS Code, Android Studio

Libraries: NumPy, Pandas, Matplotlib, OpenCV, Scikit-Learn, PyTorch, TensorFlow, Tkinter

WORK EXPERIENCE

IBM

May 2023 – Present

Technical Engineering Intern

New York, NY

- Implementing smart captioning for Soul Machine, an AI customer support for McDonald's, linking voice output, mouth movements, and captions to bring a smoother customer service experience than traditional chatbots
- Wrote shell script to automate setting up testing environments by hosting front-end Soul Machine instance, linking back-end IBM Watson Assistant, and deploying to OpenShift cloud, reducing overall set-up and testing time by $\sim 4x$
- Demoed Soul Machine product to McDonald's point of contact, utilizing value engineering techniques to communicate the viability, desirability, and feasibility of our customer care product

Atlassian

September 2022 – Dec 2022

Software Engineer Intern

San Francisco, CA

- Developed Atlassian Compass, internal developer-oriented feedback system, organizing tickets in an issue feed
- Designed a micro-service to group similar issues for the issue feed using a clustering NLP algorithm, similar to StackOverflow's related questions feature, grouping together similar issue titles with 87% accuracy
- Handled various REST API calls in a Forge web application, interacting with a Jira Kanban board to update issues

George Mason University

Jun 2020 – Nov 2020

ML/AI Research Intern

Fairfax, VA

- Designed foot-traffic AI agent model with Latent Dirichlet Allocation to simulate COVID-19 community spread
- Tested changes to various parameters and impact of public health interventions, studying simulated effects of policy
- Co-authored published research paper, presented at international research workshop ACM SIGSPATIAL ARIC 2020, *Data-driven Mobility Models for COVID-19 Simulation*, 14 citations

PROJECTS

Protein-ometer | React Native, Node.js, Python, Tensorflow

April 2023 – May 2023

- Built ML food recognition application that identifies and estimates nutritional content of protein-dense foods
- Experimented with various CNN architectures and extensive hyperparameter tuning, optimizing accuracy to 95%
- Constructed comprehensive mobile application to assist users with tracking protein intake and meeting dietary goals

LED Gameboard | C++, Arduino, HTML/CSS, Javascript

Feb 2022 – April 2022

- Coded Snake, Tic-Tac-Toe, Connect4, and Battleship for custom LED gameboard, support for Player v. AI or 2-Player
- Developed project website, implementing image carousels and hover animations in JavaScript

Insta Sudoku | Python, OpenCV, OCR, React, MongoDB

Dec 2021 – August 2022

- Created user-friendly web interface allowing users to upload images of Sudoku puzzles and receive the solved puzzle in real-time, tested on NYTimes hard difficulty daily puzzles
- Implemented thresholding, contour detection, and perspective transformation CV techniques to extract Sudoku grid from input images, used OCR techniques to accurately recognize and extract digits with 90% accuracy
- Optimized performance of Sudoku solver with algorithmic optimization techniques, solving puzzle in < 1 second