

Chinmay Purushottam

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EDUCATION

University of Michigan

Ann Arbor, MI

B.S. in Computer Science & Cognitive Science. GPA: 3.5/4.0

May 2025

Relevant Coursework: Machine Learning, Computer Vision, Web Systems, Database Management Systems, Computer Networks, Systems Programming, Data Structures & Algorithms, Computational Linguistics, Artificial Intelligence

EXPERIENCE

Software Engineer Intern (L2)

Santa Monica, CA

Chaima AI - a16z Speedrun

June 2025 – Present

- Built mobile onboarding in **ReactNative**, **ExpoRouter**, **Typescript**, **Zustand** supporting dynamic theming.
- Shipped real-time **AI agentic** booking engine (**GPT- 4 + Hyperbrowser SDK**), automating reservations, payments, deliveries through **Firebase** Cloud Functions & **Stripe** for our AI date planning **concierge service**.
- Integrated Tally **webhooks**, **Stripe**, & **GoogleMaps APIs** with **Zod** validation for structured data processing.
- Coordinated **multi-repository** development using **Git workflows**, **branch management**, **npm version control** across ReactNative/Node.js stack with custom aliases for streamlined deployments.

Computer Vision Co-op Engineer

Boston, MA

AirWorks Solutions, Inc.

May 2024 – Jul 2024

- Conducted street-level object detection on **30+GB** of telecom pole panoramas via **Label Studio & Docker**.
- Extracted metadata like pixel exposure, GPS tags, RGB channel statistics via **PIL**, **cv2** and split panoramas into flattened images via inverse affine and homography matrices. Grayscaled and downsampled for space efficiency.
- Merged public and private **COCO** training datasets, raising instances from **291 to 16,525**. Trained merged dataset on **Detectron2 & NVIDIA ODTK** models with **92%** and **78%** acc. on L4 GPU for 270k iters.

Computer Vision Engineer Intern

Boston, MA

AirWorks Solutions, Inc.

May 2023 – Jul 2023

- Evaluated DOTA model on large drone imagery object detection, achieving **84%** accuracy vs. ground truth.
- Improved **image-processing & tiling** algorithms by 4% via hyperparameter tuning & adaptive tiling.
- Integrated **OpenCV**, **MMCV**, **TorchVision**, & **PyTorch** to test & train data on **AWS's** Tesla V100 GPUs.

LEADERSHIP

Project Lead - Reinforcement Learning Curriculum

Ann Arbor, MI

Michigan Student Artificial Intelligence Lab (MSAIL)

Dec 2023 – Dec 2024

- Taught 30+** students Python fundamentals like numpy, pandas, matplotlib, **Gymnasium**, & **Scikit-learn**. Explored **Neural Networks**, **Deep-Q Learning**, **Hyperparameter tuning**. & organized RL projects.

PERSONAL PROJECTS

Anime Recommender | Python, scikit-learn, Postgre/SQLAlchemy, Streamlit, JikanAPI

May 2025 – Jul 2025

- Built a personalized anime recommender using **RandomForest**. Trained on genres, demographics, user history, and metadata vectorized via **MultiLabelBinarizer** from the **Jikan (MyAnimeList) API**.
- Labeled watched shows as positives & sampled unwatched as negatives to train per-user models on **2,000+ titles**.
- Developed a **Streamlit** UI for login, search, and top-*N* recommendations, backed by a **PostgreSQL** database.

Smart Calendar | Python, Streamlit, Google Calendar API, Canvasapi, OAuth, CSS, HTML

Jan 2024 – Apr 2024

- Developed a task management app for students with ADHD to streamline personal and academic scheduling.
- Implemented automatic event creation, **Google calendar** synchronization, **CanvasAPI** integration for assignments, **auto-place** event feature, and a **customizable UI** to improve user interaction and accessibility.

Search Engine | Python, Javascript, MapReduce, RESTAPI, Git, AWS

Sep 2023 – Dec 2023

- Built MapReduce pipeline for an **inverted index** of web pages, returning JSON search results via RestAPI.
- Developed a **GUI** & ranked results using **TF-IDF** and **PageRank** scores from the indexed server's data.

Social Media Clone | Python, JavaScript, React, RestAPI, HTML, CSS, Jinja, Cypress

Aug 2023 – Nov 2023

- Built Instagram clone using dynamically rendered client-side pages, achieving **95%** test coverage on Cypress.
- Implemented authentication and real-time features, supporting concurrent usage by **1000+ simulated users**.