

EDUCATION

University of California San Diego

Master of Science in Computer Science and Engineering CGPA: 3.95/4.0

International Institute of Information Technology (IIIT-H)

Bachelors in Computer Science (Hons. Computer Vision) CGPA: 9.36/10 (3.82/4.0)

San Diego, CA

Sept 2021 – Dec 2022

Hyderabad, India

Aug. 2016 – July 2020

EXPERIENCE

Google

Software Engineering Intern, Google Ads ML

Mountain View, CA

June 2022 - Present (Sept 2022)

- Designed and developed data processing pipelines for multiple click-to-conversion ratio prediction ML models using a MapReduce based framework. Made the pipelines scalable, extensible and fault-tolerant for multiple models and gained significant performance gain. Currently working on integrating an end-to-end pipeline management system for automating various pipeline tasks.
- Impact:** Previous approaches were not fault-tolerant and scalable and caused training workflow errors as the data processing pipeline is upstream for model training. Minimized the rate of training workflow failures by almost 30% and gained 50% performance improvement in training data generation process. **Technologies:** C++, Flume (MapReduce framework), SQL

Amazon

Software Development Engineer, Amazon Fresh

India

Dec 2020 - Aug 2021

- Developed a precompute system from scratch using AWS infrastructure to compute product data required for recommendation projects across Amazon Fresh. The computed data is used for generating faster recommendations and improving customer experience. Designed the precompute infrastructure to be scalable and extensible to multiple usecases.
- Impact:** Extensibility of precompute system helped in driving 3 recommendation projects to success at faster pace, saving an effort of approximately 9 months. All recommendation projects in future will be leveraging precompute.
- Technologies:** Java, Typescript, AWS: S3, DynamoDB, SNS, Lambda, SNS, SQS, Stepfunction, Cloudwatch

Adobe

Software Engineer, Software Engineering Intern

India

Aug 2020 - Dec 2020, May 2019 - July 2019

- Full time: Developed zooming capability in slide mode PDF view of Adobe Acrobat Web. Onboarded inline search and page scrubber on Acrobat web. **Technologies:** React, Redux, HTML, CSS
- Intern project: Built a recommendation system on Adobe Exchange Platform to recommend product extensions to customers using a siamese positive-negative pair neural network. **Impact:** Achieved an accuracy of 82% and increased click rate by 20% for Adobe Exchange. (Received full time offer). **Technologies:** Python, Tensorflow

Research & Part-time

Graduate Software Developer, University of California San Diego

San Diego, CA

Jan 2022 – Present

- Software Developer at Neurophysics Dept advised by Prof. David Kleinfeld and Prof. Yoav Freund. Designed and extended Google's Neuroglancer (Open source WebGL-based visualizer for 3D volumetric data) to support polygon and volume annotations.
- Impact:** Provide annotators with the ability to represent the cross-sectional areas of interest in the volumetric data and obtain a 3D mask of the interested region for medical research purposes. **Technologies:** Typescript, HTML, CSS, WebGL C++, 3D geometry

Undergraduate Researcher in Computer Vision Lab, IIIT Hyderabad

May 2018 - July 2020

- Advised by Prof. P.J Narayanan. Developed an unsupervised algorithm to learn image representation in style space used for image retrieval tasks. Research got published at **WACV 2020** computer vision conference. **Technologies:** Python, Pytorch.

ACHIEVEMENTS

- **Deans Academic Award** for all semesters till date for excellence in academics. (Top 3% of the batch)
- **Best project award** for my project on recommender systems during internship at **Adobe** among 80+ interns.
- **ACM ICPC (International Collegiate Programming Contest)** Ranked 2nd among all participants in UC San Diego at the ICPC North America Qualifier, (name: UCSD Team 5). Represented UC San Diego at the Southern California Regionals held in Feb 2022 and ranked among **top 10%** of the participants.
- **Competitive Programming** Codeforces Max Rating: 1771, handle: bruc_wayne, level: expert **Ranked in top 1%** among 8000+ participants in a div2 contest.

PROJECTS & SKILLS

Comment System for GraphSpace (Open source org NRNB, Tech: Python, Django, HTML, CSS, Socket Programming)

- Implemented a real-time comment system similar to google docs comments for GraphSpace platform (www.graphspace.org) of NRNB open source organization using concepts of websockets/network programming. Blog summarizing by work: [link](#).

Ultimate TicTacToe (Artificial Intelligence course, Tech: Python)

- Developed a bot using alpha beta heuristic search and minimax algorithm to play tic-tac-toe in a 16 X 16 grid in python. Github: [link](#)

BFS distributed systems (Distributed Systems course, Tech: Erlang, Python)

- Implemented a breadth-first search in a distributed environment using algorithms such as sequential search, parallel search, 1D partitioning and 2D partitioning techniques. Performed in depth analysis and experiments on all algorithms. Project summary: [link](#)

Programming Languages, Libraries and Tools: C++, Python, Java, C, HTML, CSS, MySQL, Javascript, TypeScript, AWS, Pytorch, Tensorflow, Django, React, scikit-learn, OpenCV

Coursework: Algorithms, Machine Learning, Distributed Systems, Operating Systems, Databases, Computer networks, Compilers