

EDUCATION

Master of Science in Computer Science (Specialization in Artificial Intelligence)

Arizona State University, Tempe, AZ

Jan 2022 - Dec 2023

CGPA 4/4

Relevant Coursework: Statistical Machine Learning, Introduction to Deep Learning, Data Mining, Data Science for System Decision Analytics

Bachelor of Engineering in Computer Science and Engineering

University of Mumbai, Thakur College of Engineering and Technology (TCET), Mumbai, INDIA

Aug 2017 - Jun 2021

CGPA 9.31/10

PROFESSIONAL EXPERIENCE

Data Engineer Intern - Amazon

May 2023 - Aug 2023

- Reduced costs by **40%** and improved performance by **80%** for **ETL pipelines** and **Redshift Clusters**, increasing the efficiency of benchmark setting for **Amazon Fulfillment Centers** through an elaborate dashboard.
- Optimized identification and rectification of performance detrimental gaps and incorrect keys in sub-par jobs and queries.
- Proposed **innovative AI integration strategies** to stimulate growth and promote innovation within existing organizational projects.

Research Analyst - Luminosity Lab

Jan 2023 - Dec 2023

Rodel Project -

- Researched and analyzed **predictive tax models** to integrate into an **innovative and interactive simulator** of Arizona to enable leaders and citizens to explore the implications of proposed policies ranging from education to infrastructure hence aiding in **informed decision-making**.
- Developed and optimized the user interface using ReactJS and Three.js to improve user experience and responsiveness by **28%**.
- Implemented a **KD-Tree Nearest Neighbor** model to accurately assign students to schools by considering factors like proximity and school capacity.

Data Science Research Assistant - Arizona State University

Aug 2022 - Dec 2022

- Analyzed **Arizona's Medicaid data**, policy changes over the past **5 years**, and **impact of COVID-19** on **Opioid Use Disorder**.
- Identified **patterns in treatment gaps** to evaluate program effectiveness and **remission rates** of currently enrolled patients.
- Managed project progress and stakeholder communication for the **State Opioid Response (SOR)** initiative.

Machine Learning and Artificial Intelligence Specialist - EdPlus

Mar 2022 - Aug 2022

- Developed **classification models (CatBoost)** to **forecast and identify at-risk students** leading to **12% increase** in success rates over a semester.
- Contributed to **student success** by providing targeted audience lists of students who require **interventions** based on the model predictions.
- Leveraged **Google Analytics** and **BigQuery** to track and analyze **web activity** aimed to increase prospective enrollments for ASUOnline.
- Reduced fetch and load time by **65%** by successfully reproducing **efficient SQL queries** for Google Data Studio dashboards in BigQuery.

Machine Learning Intern - iPing Data Labs

Aug 2021 - Nov 2021

- Developed a **Deep Learning** powered **Automated Energy Invoice Data Extractor** using **Computer Vision** and **NLP**, reducing manual labor by **80%**.
- Trained **CNN** models to identify the **semantics** and localize **10+ relevant data points** in **25+ invoice formats**, achieving **95%+ F1-Score**.
- Devised a parsing algorithm to **extract and structure data** from invoices using Tabula and OCR to **engineer model data** for training.
- Interpreted **1,25,000+ images** from CCTV feeds to detect **7 object categories** during **day and night** for **Traffic Detection and Tracking**.

Team Lead and Software Development Intern - TinkTank

May 2020 - Dec 2020

- Led** and built an analytics tool that enables recruiters to **analyze, track and visualize** team performance metrics/KPIs.
- Implemented a **Business Rule Engine** for **custom data validation** on **40+ attributes**, ensuring clean data for **user-specific dashboard visualizations**.
- Designed and developed the **ETL pipeline** to **map data** from **complex datasets and multiple data sources** using PostgreSQL and Django.

PROJECTS AND RESEARCH

Visualization System for Interpretability of Adversarially-trained Deep Learning Models, Academic Research Project

Sep 2023 - Current

- Designing a visualization system for **deep learning models** that are trained to **resist adversarial attacks** and remain **interpretable**.
- Comparing the performance of regularly and adversarially trained **ResNet-18** model with **Pytorch** on **CIFAR10** dataset and using **"concepts"** to test their interpretability retention.

Analysis of Machine Learning Models for Road Traffic Accidents, Academic Project

Feb 2022 - May 2022

- Led and implemented an **end-to-end** Machine Learning project pipeline to **classify** Accident Severity from a **highly imbalanced dataset**.
- Scrutinized four **predictive models** including **KNN** and **Decision Trees** and boosted the model accuracy up to **84%** by incorporating **hyper-parameter tuning**.

ShapeNSoul (Mobile Application), Personal Project

Dec 2020 - Jan 2021

- Developed a Mobile Application using **Flutter** and **Firestore** for a Naturopathy Clinic to facilitate appointment scheduling, notification alerts, and personalized profile and diet charts for each patient.

CO-CURRICULARS

- Scholarship Reviewer**, Grace Hopper Celebration (GHC) 2023 AnitaB.org

May 2023

- Travel Grant Reviewer**, Graduate and Professional Association (GPSA) - Arizona State University

Mar 2023 - Dec 2023

- Volunteer (MC)** - Open Data Science Conference, San Francisco

Nov 2022

- Social Volunteer**, Extension Work Team (EWT-TCET)

Aug 2018 - May 2019

CERTIFICATIONS

Google Data Analytics Professional Certificate, Google, Coursera | Advanced Google Analytics, Google Analytics | Deep Learning Specialization, deeplearning.ai, Coursera | Python 3 Specialization, University of Michigan, Coursera | Introduction to Machine Learning, IIT Madras, NPTEL

SKILLS

Languages : Python, SQL, HTML/CSS, JavaScript, C/C++, Java

Libraries : Pandas, NumPy, Scikit-learn, NLTK, OpenCV, Matplotlib, Keras D3.js, Three.js

Technical Skills : Machine Learning, Data Science & Analytics, Data Structures & Algorithms, Database Management Systems

Frameworks : BigQuery, Django, Git, AWS, GCP, Google Marketing Platform, PostgreSQL, PowerBI, JIRA, Tableau, PyTorch, Tensorflow, Firebase