

DIVYA PATTISAPU

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EDUCATION

The University of Chicago

Master's Program in Computer Science - CGPA: 3.71/4

Coursework: Web Development, Cloud Computing, Algorithms, Parallel Programming, Distributed Systems, Machine Learning

Chicago, IL

Mar 2024

Indian Institute of Technology, Bombay

Bachelor and Master of Technology in Mechanical Engineering - GPA: 8.7/10

Coursework: C++ Programming, Deep Learning: Theory & Practice, Data Analysis & Interpretation, Discrete Event Simulation

Teaching Assistant - Engineering Data Mining & Applications: Instructed 200+ students, Designed & evaluated their assignments

Mumbai, India

Aug 2021

TECHNICAL SKILLS

Languages	: Python (Advanced), SQL (Advanced), C/C++ (Intermediate), Go (Intermediate)
Cloud Services	: Amazon Web Services (EC2, S3, Glacier, SQS, SNS, ELB, Lambda - Serverless, CloudFormation, DynamoDB)
Databases & Frameworks	: Apache Impala, Apache Hadoop, PySpark, PostgreSQL, MongoDB, Redis, Microsoft SQL Server, MySQL
Web frameworks	: HTML, CSS, JavaScript, React.js, FastAPI, Flask, RESTful API, Bootstrap, Alembic, Docker, Git, RabbitMQ

EXPERIENCE

University of Chicago Professional Education

Data Analytics Intern

Chicago, IL

Feb 2023 - Present

- Enhanced insights into student admission decline patterns by performing **customer segmentation** using unsupervised machine learning models and created a UI for creating customer profiles enabling quick data-driven decision-making
- Developed an **ETL pipeline** for student enrollment using Python and Destiny API, streamlining the process and ensuring data accuracy
- Automated the generation of **campaign performance reports** on **LinkedIn, Google, and Facebook** using their respective **APIs**
- Created, organized, and optimized **dashboards on Tableau Server**, facilitating data visualization and quantitative analysis for custom requests
- Identified factors contributing to accepted, denied or declined applications using **Decision Tree Classifier** and **Logistic Classifier** models

MasterCard

Software Engineer - Big Data, Ad Tech and Data Science

Gurugram, India

Jul 2021 - Jul 2022

- Optimized the marketing team's flagship product, Ad Insight's production code using Apache Spark and Apache Hive, boosting performance through query optimization and efficient cluster resource utilization
- Leveraged K-Means ML models for **customer segmentation**, fueling strategic debit portfolio enhancements and targeted campaigns
- Engineered a Python **web scraping automation** for competitor analysis & market research, yielding a 70% operational efficiency enhancement
- Developed a **Quality Inspection code** tailored for 4 markets, effectively automating the auditing process of product data before deliveries
- Conducted data validation & quality testing at each production stage to ensure early issue identification & resolution, reducing runtime by **40%**
- Core Team Member, Girls4Tech:** Hosted collaborative learning workshops to motivate young girls to build STEM careers

PROJECTS

Microservices-Powered Auction Website

Oct - Dec 2023

- Designed and implemented an eBay-modeled auction website, handling user authentication and bidding functionalities in a team of 5
- Streamlined microservices integration using **mediator service**, ensuring seamless communication and robust integration via **unit testing**
- Developed a full-stack solution for autonomy development workflows, incorporating frontend (React.js), API layer, database ORM (SQLAlchemy) to enable effective product features, RabbitMQ for communication and Docker for containerization for deployment

Parallel Image Processing

Oct - Dec 2023

- Designed and implemented a versatile image processing package in Golang, with a command-line interface to input images
- Developed functionalities such as grayscale transformation, sharpening, blurring, and edge detection on the input batch of images
- Integrated a **work-stealing algorithm** to opportunistically steal work from busy threads, **improving the speedup by 10%**

Genomics Annotation Service – AWS Cloud Computing

Jan - Feb 2023

- Developed a SaaS application for **file upload, processing** and **retrieval** with job status view and free/premium user file storage features
- Integrated the application with a **Stripe payment system** and included a **notification system** to inform the users of their job completion
- Implemented an archival process to transfer free users' result files from S3 to Glacier to reduce the storage cost incurred

Other Web Development Projects

Jan - Jun 2023

- Developed an **AI Checklist App** which creates customized checklists with support for subtask creation using Next.js, Figma and GPT 3.5 API
- Implemented a custom version of Slack, a real-time messaging app using React.JS on the front end & Flask on the back end
- Built a **Content Management System** for a web journal, with posts, comments and an admin page using PHP

ADDITIONAL PROJECTS

- [\[Publication\]](#) Identified the contributing factors to EV buyer readiness across cities in India to improve its adaptation using Machine Learning
- ML Algorithms:** Coded decision tree classifiers, SVMs, logistic regression (gradient descent), boosting, CNNs from scratch in Python
- Computer Systems:** Programmed an object-oriented Jack-language compiler comprising of a tokenizer & a code generator
- Advanced Computer Architecture:** Implemented an n-associative cache emulator, and programmed an object oriented language compiler
- Developed a **custom Snake game** by creating game "objects" (obstacles, snake, food) using function pointers & a variable length array in C