EDUCATION

ADITYA

BARSAINYA

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RESEARCH PROJECTS & PUBLICATIONS

**TERADATA** *San Diego, California* *Software Engineer Intern | Cloud Incubation Team June 2022 – Present*

* Currently working on designing and developing RBAC (Role Based Access Control) service using AWS and HashiCorp Vault to provide access control for various microservices.
* Enhanced AMIMAN service to handle the lifecycle of an EC2 image and allow event-based publishing of AMI to different AWS regions Also added API support to modify the image type configuration using FAST API and PostgreSQL.

**University of California San Diego** *San Diego, California* *Graduate* *Teaching Assistant March 2022 – Present*

* TA for the course CSE-124 Networked Services in Fall 2022, and CSE-185 Advanced Bioinformatics Laboratory in Spring 2022.
* Responsible for conducting labs, office hours, and discussion sessions.

**GRAB** *Bangalore, India* *Software Engineer | Payments Core Team December 2019 - August 2021*

* Developed Payment SDK to provide a unified payment experience, the primary focus was to consolidate the wallet landscape to make it more user-friendly which resulted in 100% retention and a 28% Increase in the userbase.
* Built a user data ingestion Kafka pipeline to stream out the crucial transaction data to the Finance Team.
* Reduced 85% of CE Ops work by introducing features like auto-reject payment requests and bulk request processors.
* Lead a team of 4 people to work in the agile environment, worked as Scrum master and conducted KT session.

*Software Engineer | Digital Marketplace Team July 2018 - November 2019*

* Launched Bill payment solution by building scalable microservice in Go using AWS step function, Amazon RDS, Redis and hosted on AWS cloud. Which resulted in a total of 8% TPV uplift in the whole Grab ecosystem.
* Reduced 63% of transaction fraud by remodelling payment flows through Implementing Authorize and Capture architecture using Go Dispatcher and Kafka. The new architecture was able to handle 250K requests per day.
* Spearheaded the development of an Auto-Settlement module to settle payments directly with merchant and allow multiple aggregators to be onboarded for the same product and helped reducing manual work by 71%.
* Received SPOT award by peer nomination at Grab for contributions to Grab Pay Digital Marketplace platform across Southeast Asia.

**Intel Technology India Pvt Ltd** *Bangalore, India* *Application Developer Intern | Enterprise Data Warehousing Team January 2018 - June 2018*

* Developed an ETL application to perform data modelling and reformatting using Teradata and Ab Initio. Other key features of application Included Data Quality checks, Logging and Metadata maintenance.
* Accommodated 17% more data just by expanding the database by 6%.

**University of California San Diego (UCSD)**, **San Diego, CA** *September 2021 - December 2022(exp.)*

*Master of Science in Computer Science GPA: 3.9/4*

**M.S. Ramaiah Institute of Technology, Bangalore, India** *August 2014 - June 2018*

*Bachelor of Engineering in Computer Science and Engineering GPA: 9.39/10*

WORK EXPERIENCE

**Handling Uncertainty in Linguistics**

*Using Semantic Networks| Python (tkinter, mixer, pickle), Networkx, Textrazor [*[*code*](https://github.com/adityabarsainya/semantic_network)*]* *January 2018 - May 2018*

* Designed a learning agent to creates a Knowledge Base using a semantic network to handle ambiguity in various domains.
* The project was awarded as the best final year project in the CSE department.

*Using Probability Theory | Python (nltk, pandas), PyMySQL, Apache [*[*code*](https://github.com/adityabarsainya/handling_uncertainty_probability)*]*  *August 2016 - January 2017*

* Project aims at portraying the capabilities of probabilistic approaches in handling uncertainty. A learning agent was designed with a knowledge base as SQL database to handle ambiguity while taking orders in a food mart.
* Research was [published](https://doi.org/10.1007/978-981-10-7641-1_21) in an international journal and presented in the **International Symposium on Data Science and Big Data Analytics (ISDB)** at Sri Aurobindo Institute of Technology, Indore 2018.

**Analysis and Prediction of Survival after Colorectal Chemotherapy**

*Using Machine Learning Models | R (plyr, caret, rpart), Matplotlib [*[*code*](https://github.com/adityabarsainya/colon_prediction)*]* *June 2017 - September 2017*

* Developed a framework using various machine learning models for analysing medical data on colon cancer patients and predict the survival probability (recurrence/death) after chemotherapy.
* Research [published](https://doi.org/10.1109/ICACCI.2018.8554832) in a Journal **International Conference on Advances in Computing, Communications and Informatics (ICACCI)**.
* **Languages :** Go, Python, Java, C++,HTML, CSS, R, SQL, MongoDB, PostgreSQL,
* **Frameworks and Technologies :** Linux, Git**,** AWS (EC2, ELB, DynamoDB, Elastic Cache, S3, Step function)

Jenkins, REST API, gRPC, Kafka, Dispatcher, Terraform, Docker, Fast API

* **Tools :** Ab Initio, Autosys, Datadog, Kibana, Consul, Phabricator, Postman, Vault

KEY SKILLS