

Barun Das

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Education

GEORGIA INSTITUTE OF TECHNOLOGY

Aug 2021 – May 2023

MS in Computer Science

GPA: 4.0/4.0

Relevant Courses: AI, Big Data Systems, Data & Visual Analytics, Personal Health Informatics

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

July 2016 – June 2020

B.Tech. in Metallurgical & Materials Engineering / Computer Science & Engineering (minor)

GPA: 8.97/10.00 (rank 2)

Experience

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

Graduate Teaching Assistant

January 2022 - Present

- Helped in the smooth execution of CSE 6242 – Data and Visual Analytics course consisting of around **1200** students
- Responsibilities included holding office hours, answering Piazza posts, grading and developing assignments

GENERAL ELECTRIC

Hyderabad, India

Software Engineering Specialist | Java, Docker, Kubernetes, Jenkins

August 2020 – August 2021

- Helped develop an internal Kubernetes based solution for creating microservices – used by over **150 teams** globally
- Designed and developed REST-based microservices in Spring Boot to add functionality to the platform (e.g., testing, storing preferences, etc.) – dockerized, wrote appropriate Jenkinsfiles & deployed them on Kubernetes
- Created and migrated Helm charts and PDIs for automating the deployment of microservices in Kubernetes
- Visualized operation statistics for over **15** internal and default services using Grafana dashboards and Prometheus
- Configured Alertmanager to send out alerts to relevant stakeholders when user-defined thresholds were crossed
- Conducted performance tests on messaging queues (*Artemis*, *Kafka*) using *Apache Camel* to ensure SLAs were met
- Documented dashboard and cluster configurations in Markdown and AsciiDoc - used for onboarding new teams

GENERAL ELECTRIC

Hyderabad, India

Digital Technology Intern (SDE Internship)

May 2019 – July 2019

- Performed frontend development using CSS stylesheets, JavaScript, Polymer Project applications and Vaadin
- Developed an automated test suite using Protractor-Cucumber which was integrated with the CI/CD pipeline

Relevant Projects

Personal Website: <https://barunkgp.github.io>

BLOCKBOARD | Python, Javascript (D3.js, Swiper.js) HTML, CSS, Azure

Oct 2021 – Dec 2021

- Collaborated with 5 teammates to develop an interactive dashboard aggregating financial data, on-chain metrics and Twitter sentiment for Bitcoin, that helped traders and novice investors to better understand the crypto market
- Helped develop a fullstack web-app with a Python backend that called various REST endpoints to gather data which was stored on an Azure MySQL database and then analyzed; frontend was rendered using JS and jQuery
- Combined data sources to create novel visualizations based on block-time which was more intuitive for a layperson
- Analyzed correlations between price and different data streams to help users gain create better trading strategies

FEDERATED LEARNING BASED RECOMMENDATION SYSTEM | Pytorch, scikit-learn

Oct 2021 – Dec 2021

- Collaborated with 4 teammates to develop a secure federated learning model to recommend movies to users
- Trained a neural network regression model for the edge nodes using the *MovieLens* dataset
- Sent encrypted updated gradients to a central model which updated itself and recommended movies for the users.

AGEING PROGNOSTICS FOR ENGINEERING COMPONENTS USING ML | Python

July 2019 – May 2020

- Trained an SVM which learned the conditions for ageing failure in independent parameters of a 2nd-order system
- Developed a methodology which used the error response to identify ageing failure in the second-order system
- Built a similarity-based prognostics model that used regression analysis to predict the RUL of components

Skills (listed in descending order of proficiency)

- Languages and frameworks:** Python, Java, C/C++, Javascript, HTML, CSS, Spark, SQL
- Technologies:** Docker, Kubernetes, Prometheus, Grafana, Alertmanager, Tableau, Figma, Jenkins, Hadoop, AWS, GCP, Artemis