Abhik Chakraborty

Software Developer,
Open-source Enthusiast

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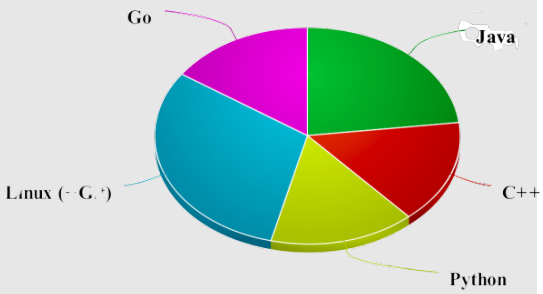
Skills

Interests

- Full Stack and DevOps
- Software Engineering & Testing
- Machine Learning
- Algorithms and Programming
- System Software and DBMS

Languages



Education

2017 - 2021 (Expected) **BTech, Computer Science , IIT Roorkee** — IIT Roorkee
Roorkee, Uttarakhand, India
3rd year, *Specialization: CSE*, CGPA:9.342

2015 - 2017 **PCM, Vijay Ratna Junior College** — Vijay Ratna
Hyderabad, Telengana, India
Percentage: 97.9%

Project

Mar,2020 - Apr,2020 **Automated Classification of XRD patterns : Image Processing**

- Developed a Convulational Neural Network(CNN) model to automate the process of X-Ray diffraction patterns and performed cross-validation across various other Machine Learning Models like Naive Bayes, Support Vector Machines,etc.
- Implemented Class Activation Maps to give a better reference for the classification and a decision over the dataset.
- Performed Data Augmentation and Pre-processing[As first Author]

March,2020 - Apr,2020 **Railway Ticket System: Software Engineering Project** — SE Lab, IITR

- Developed a case study using various use-case and class diagrams to demonstrate the working of a railway ticket system -working of client-server model, client to customer interaction and ticket generation.
- Performed an analysis of the system design for addressing large number of requests and allow real-time ticket bookings.
- Developed a basic application to demonstrate the involvement of Load Balancers, Replica's of Server,etc.

May,2019 - Aug,2019 **Azure container networking: Google Summer of Code Project** — Project

- Azure e2e testing by using AKS engine Automation of deploying clusters using shell scripting.Code(Go) Test cases for service annotations of the LoadBalancers.
- Adding ACR-pull images e2e tests

Feb,2019 - Mar,2019 **Implementing a new Scheduling Policy in Linux** — OS Lab, IITR

- Developed a new algorithm to process faster scheduling though it was less efficient in certain cases as compared to SJF but gave good results upon large processes with less waiting time.
- Implementation of algorithm using C to schedule the processes.[in a **UNIX** environment]

Feb,2020 - May,2020 **Platelet Count Automation : DL, NLP based Model** — AI Lab, IITR

- Image of Blood Samples processed and segmented.
- Applied DL algorithms to obtain high accuracy and precision.
- Various classifications models were implemented to search out for the best results. [cross-validation performed]
- Major diseases[COVID19] can be detected using Platelet Count

Experience

Nov 2018 - Feb 2019 **Software Engineering Intern at Analysed.in** Analysed.in

- Worked upon the **Php** at backend along with **REST APIs**, load-balancing multiple customer requests and **HTML** / **CSS** and **Javascript** for front-end
- Create, use, maintain a capacity model for on-prem and **AWS** hosting, based on E2E user flow profiles
- Queuing and data-pipeline solutions **(RabbitMQ, SQS)**

May 2019 - July 2019 **Software Engineering Intern at IBM** IBM

- Worked upon **IBM cloud** services with **Server** support
- Setting up the **scala** sbt environment on RaspberryPi and deploying the developed application on **RaspberryPi** using **Mosquitto** server.

Aug 2019 - Oct 2019 **ML Analyst at Matsci.ai** Matsci.ai

- Selecting features, building and optimizing classifiers using machine learning technique.
- Creating automated algorithmic failure detection systems and constant tracking of its performance using **Python** notebook integrations[**Data Analysis**].

Oct 2019 - Till **Google Summer of Code Mentor under KubeFlow** KubeFlow

- Using **AWS Kubeflow** issue labels ,common **CRD** validate, mutating, and conversion webhook for all operators and build reusable **Tekton** pipelines to run notebooks (using papermill or similar tool), emit **HTML**, and then upload to **GCS**, **S3** or **Git**.

Apr 2020 - Jun 2020 **Software Engineering Intern : VDC Project**

- Developed a Virtual Dental Clinic where dental issues of patients are addressed at real-time.
- Developed using **Django (Python Framework)** , worked upon real-time chats to connect doctors to patients using channels, added up video calling feature, developed various screens based upon the **UI** wire-frames and detailed documentation of the same.
- Worked upon automated notifier for further appointments and worked with **REST APIs** and **GraphQL**
- Designed the algorithm for scheduling the doctors and their patients (list of objects) and managed the database (**SQL**)
- Built and deployed the model - **MVC** Architecture

Acheivements

Mindsweeper :first prize at algorithms coding contest at **Cognizance, IIT Roorkee**
LiFT Scholarship : Cloud Captain Winner under Linux Foundation.
B-Plan, E-summit: Finalists at the biggest business competition at North India.
Google Code-In : One of the most active mentors under JBoss Community
Microsoft Open Source Hackathon: Finalist.
Red Hat Reboot Hackathon: Finalist
Secured **AIR:316** in JEE amongst **1.5 million** candidates
Secured 100 percent in computer science at **ICSE board**
Secured first prize in **CAT olympiad** held all over the state