

Aditya Karlekar

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EDUCATION

University of Florida, Gainesville

May 2021

Master of Science, Computer Science GPA: 3.62/4.00

Relevant Coursework: Distributed Systems, Database System Implementation, Algorithms, Computer Networks

Rajiv Gandhi Technical University, India

Jun 2017

Bachelor of Engineering, Computer Science GPA - 7.91/10.00

Relevant Coursework: Operating System, Computer Networks, Compiler Design, Software Development, Data Structures

SKILLS

Languages: C++, Java, Python, JavaScript, R, HTML5, CSS3, SQL

Frameworks and Tools: Hadoop, ReactJS, Git, D3js, Tableau, Spark, AWS, Azure, Docker, NoSQL, NodeJS

Operating Systems: Unix, Linux, Windows

PROFESSIONAL EXPERIENCE

Graduate Research Assistant (*Part-time*), Florida Institute for Cyber Security, UF, Gainesville, FL

Nov 2020 – Present

- Designing algorithms to make Machine Learning systems tolerant to adversarial attacks.

Data Analyst Intern (*full-time*), Apilation.ai, Allen, TX

Jun 2020 – Aug 2020

- **Data Consolidation:** Designed, build, and tested NoSQL aggregation pipelines of consumer data for a top beverage firm in an agile environment and saved the manual audit of 600 hours. Developed predictive models using H2O and generated visualizations for root cause analysis.

Research Assistant (*full-time*), Indian Institute of Information Technology, Jabalpur, India

May 2018 – Aug 2019

- **Non-Linear Clustering:** Independently developed novel clustering algorithms using divergences like Jeffreys's and S-divergence with Python and showcased their efficacy on various artificial and real-life datasets against well-known clustering algorithms like k-means, fuzzy k-means, hierarchical clustering, and weighted k-means.
- **SoyNet:** Developed a Deep Neural Network with Keras to identify 14 different diseases in Soybean leaf. Designed an Image processing module in Matlab to filter noise from leaf images and achieved test accuracy of 98%.

Web Developer (*full-time*), Learning Zapper, Bangalore, India

Mar 2018 – Apr 2018

- **Landing Page:** Worked as part of the Front-end team and designed responsive Web applications. Created the website's landing page and developed Dashboard elements using HTML5, JavaScript, jQuery, ReactJS, and Bootstrap. Designed User Login System and performed form validation.

Web Developer Intern (*full-time*), 365Doctor.in, Bangalore, India

Nov 2017 – Jan 2018

- **Patient Query Management:** Developed the query management system to handle around 5000 customer queries a day. Designed the Front-end and Back-end of query manager using HTML, CSS, JavaScript, and PHP, and implemented the database using PostgreSQL.

PROJECTS

- **P2P Application:** Designed and implemented a multi-threaded Peer 2 Peer file sharing application like Bit Torrent in Java using Socket programming.
- **Face Recognition:** Implemented a face recognition system using One-shot Learning. Implemented Siamese Networks using Pytorch and achieved 89% test accuracy
- **MicroData:** Developed a fast, indexed based relational database using C++, Valgrind, and g++ framework. Supports functionalities like table creation, table update, and query clauses like Select, Where, Group By, Sum, and Distinct.
- **K-Means Visualizer:** Developed a web application to visualize K-means algorithms using D3js, JavaScript, and HTML/CSS.
- **Twitter Simulator:** Built a Twitter clone replicating all the real Twitter engine functionalities and simulated human interactions. Utilized Elixir Phoenix framework for Front-End features and Elixir's GenServer module for Back-End logic.
- **Gossip Simulator:** Implemented gossip and push algorithms in a distributed environment using Elixir's GenServer and evaluated its efficacy on various network topologies.
- **Micro-mouse Competition:** Implemented A* algorithm and Dynamic programming using Python in a project inspired by the Micro-mouse competition to find an optimal path in a maze from one corner to the center.

AWARDS AND AFFILIATIONS:

- Recipient of Microsoft Udacity Machine Learning Scholarship 2020 and Google Udacity Android Scholarship 2018.
- Volunteered in the career fair organized by the CISE department at the University of Florida; Sep 2019.
- Conducted a workshop for around 100 students on Python programming language at HCET, Jabalpur, India.

PUBLICATIONS

- **SoyNet: Soybean Leaf Diseases Classification**, Journal of Computers and Electronics in Agriculture, Elsevier, May 2020.