+91 9955526208
fazlerahman98@gmail.com
www.fazlerahmanejazi.wordpress.com
fazlerahmanejazi
fazlerahmanejazi

Fazle Rahman Ejazi

Education

2016 – 2020 (Expected) **Indian Institute of Technology Patna**, *Bachelor of Technology in Computer Science and Engineering*.

Work experience

May 2019 – July 2019 **Software Development Intern**, ***Codenation***, Bangalore, India.

- Worked with Static Analysis Team on Codegraph to implement the *Generic Program Dependence Analysis* module which computes Data Dependence Graph (DDG) and Control Dependence Graph (CDG) from source code for up to 10 languages.
- The project mainly involved working with ASTs and CFGs and performing static code analysis.
- Developed and implemented an algorithm for computing DDG that supports easy incorporation of new languages.
- Implemented Fast Dominance Algorithm for computing DDG that finds the dominators in a CFG efficiently.

May 2018 – July 2018 **Research Intern**, ***The Institute of Mathematical Sciences***, Chennai, India.

- Worked on Parameterized Algorithms, mainly the problems involving Feedback Arc Set on directed graphs.
- Obtained a quadratic vertex kernel for Feedback Arc Set on Directed Split Graphs.

Achievements

Competitive Programming

- Top **1%** Percentile Globally on **Hackerrank**(Rated **2274**)
- Top **1%** Percentile in India on **Codeforces**(Rated **1933**)
- Solved over **500** problems on **Codeforces** and **200** problems on **UVa Online Judge**

JEE Adv Secured 98.71 percentile among 0.2 million candidates.

JEE Main Ranked in top 0.5% of 1.5 million candidates.

Technical Skills

Languages C, C++, Python, Java, Cypher, Haskell, SQL, JavaScript, Bash

Tools and Libraries Django, Neo4j, Docker, GNU/Linux, Flask, Git, GitHub, CMake, LaTeX

Courses

Computer Science Advanced Algorithms, Network Science, Artificial Intelligence, Operating Systems, Networks, Computer Graphics, Databases, Computer Architecture, Formal Language and Automata Theory, Algorithms

Mathematics Linear Algebra and ODE, Real and Complex Analysis, Partial Differential Equations, Discrete Mathematics, Probability Theory, Computational Topology, Abstract algebra

Projects

Sept 2019 – Present **ChocoPy Compiler**, (*Haskell, LLVM*).
- Writing a compiler for ChocoPy (statically typed Python 3 subset) in Haskell along with a Garbage collector.

Jan 2018 – March 2018 **MindHunter**, (*Python*).
- Used Random Decision Forests to predict probability that a crime belongs to certain category based on its time and location. Baseline(kNN): 45% Accuracy. Random Decision Forests: 73% Accuracy.
- Used these predictions to develop an efficient API that suggests probable crime category at a given location and time among the total of 39 categories.

Nov 2017 – Dec 2017 **GIS API**, (*Python, Flask*).
- Implemented Geographic Information System API using Flask and PostgreSQL which supports basic CRUD operations.
- Supports adding a new location, fetching all nearby locations and determining which region a new location falls in.

Sept 2017 – Oct 2017 **Yelp Maps**, (*Python, Django*).
- Used machine learning to predict the rating a user would provide for a given restaurant.
- Implemented k-means algorithm to partition the restaurants into clusters based on location.
- Created a Voronoi visualization of the restaurants using d3.js and Lloyd's algorithm.

Jan 2017 – Feb 2017 **Algorithm Library**, (*C++*).
- Implemented an algorithm library which has implementations of several Number Theory Functions, Graph Theory Algorithms, Computational Geometry Algorithms, Data Structures, Flow Network Algorithms, Fast Fourier Transform, Aho Corasick Pattern Matching, Persistent Data Structures, Suffix arrays, Suffix trees and Gaussian Elimination.

Position of Responsibility

2018-Present
- Coordinator, Competitive Programming, NJACK(Computer Science Club of IIT Patna).
- Conducted programming workshops and lectures for freshers
- Prepared algorithmic problems for various programming contests under the club.