

# Fazle Rahman Ejazi

## Work experience

Jan 2021 – **Software Development Engineer, Amazon**, Berlin, Germany.

- Current
  - Part of Pricing Console Team, AWS Billing
  - Improved and maintained backend and frontend of the Pricing Console(Java, TypeScript)
  - Worked on and lead a feature development(Approval based workflows) which reduced the operational load on Pricing Console Team by 70%.

Aug 2020 – **Software Development Engineer, Codenation**, Bangalore, India.

- Nov 2020
  - Developed a file hosting service for business that offers cloud storage, file synchronization and client application with all relevant features.
  - Used AWS S3, Lambda, DynamoDB, SQS, Cognito and API Gateway.

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

- July 2019
  - 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 in Python.
  - Implemented Fast Dominance Algorithm for computing CDG that finds the dominators in a CFG efficiently in Python.

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

- July 2018
  - 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.

## Education

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

## Achievements

- Competitive Programming
  - Member of team Squirtle Squad which was ranked **4th in ICPC Asia Kharagpur Onsite Round 2019**
  - Member of team Squirtle Squad which was ranked **18th in ICPC Asia Regionals Online Round 2019** among 4401 teams

JEE Adv Secured 98.71 percentile among 0.2 million candidates.

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

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## Projects

- Jan 2018 – **MindHunter**, (Python).  
March 2018
  - 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 – **GIS API**, (Python, Flask).  
Dec 2017
  - 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 – **Yelp Maps**, (Python, Django).  
Oct 2017
  - 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.

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## Technical Skills

Languages C++, TypeScript, Python, Java, C, Cypher, SQL, JavaScript, Bash  
Frameworks and Services Git, AWS(S3, Lambda, DynamoDB, SQS, Cognito and API Gateway), Django, Neo4j, Docker, GNU/Linux, Flask, Kibana,  $\text{\LaTeX}$

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## 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