Arahant Ashok Kumar

(201) 736-7373 | arahant.ashok@nyu.edu | Jersey City, NJ | LinkedIn | GitHub

Education

- **New York University,** New York, M.S., Computer Science — May, 2021 Expected
  Courses: Data structures, Operating systems, DevOps, Computer Networks, Security, Programming languages
- **National Institute of Technology**, India, B.Tech, Information Technology — May, 2015
  Courses: Linear algebra, Computer Architecture, Database systems, Object oriented programming, Web services

Technical Skills

- **Technology -** C, C++, Java, Python, Scala, Node, AngularJS, Android, Flask, Serverless, Unix, Multi-threading
- **Database -** MySQL, Postgres, RDS, DynamoDB, CouchDB, GCP Firebase
- **DevOps -** Vagrant, Docker, CI/CD, Travis CI, REST, PyUnit, Jest, TDD, BDD, Selenium, Kubernetes, Swagger
- **Cloud -** AWS - Cognito, S3, Lambda, CloudFront, API Gateway; IBM - CloudFoundry, Toolchain; Heroku

Work Experience

PIVOTtag Inc, NYC, Software Engineer — Aug, 2019 - Dec, 2020

- Designed architecture, threat models and a roadmap for the adoption of online payment technologies
- Developed an elaborate cloud ecosystem on AWS - S3, RDS, Serverless, Cognito, API Gateway, SNS, CloudFront
- Managed product deployment through an incremental, lean startup roadmap, which reduced the cloud costs by 20%
- Designed an application error data analytics API which improved debugging rate by 10%
- Built a QR code-based data checkin and retrieval service on AWS, using Serverless to build APIs

PIVOTtag Inc, NYC, Full Stack Developer — Feb, 2019 - Aug, 2019

- Developed an anonymous peer-to-peer and group texting app using QR code, Twilio and NodeJS to locate lost items
- Built and deployed a full-stack web app using NodeJS, AngularJS & NoSQL on Heroku & GCP
- Developed a 2-way automated, text-based user feedback chatbot which improved refactoring frequency by 20%

NYU Cenre for Quantum Phenomena, NYC, Research Intern — June, 2020 - Aug, 2020

- Built a prototype compiler for topological quantum computing using graph theory, algorithm and compiler theory
- Processed the Quantum hardware (2D Nanowire) as a Graph, to simulate motions, which constructs Quantum gates
- Used Dijkstra's algorithm to extract the shortest path sequences and rank them
- Generated a Nanowire Graph state matrix capturing quantum particles' movements on the nanowire graph
- Developing the 1st open source software suite — library, compiler, simulator — for Topological quantum computing

Hack 4 Impact, NYC, Data DevOps Engineer — Dec, 2020 - Present

- Created a data engineering pipeline to preprocess a huge dataset and shard and deploy the statistics in cloud DBs
- Created indexes on these DBs for efficient access, and developed Serverless RESTful APIs access points
- Led the team to build a website to create visualization models and integrate them with respective DBs via the APIs

Projects

E-Commerce Inventory, Product Owner — NYU, Fall 2020

- Adopted agile methodologies by using Kanban boards to keep track of milestones and the issues in 2-week sprints
- Personally authored 56 out of 69 user stories and issues, and implemented 34 of them.
- Automated test data generation for TDD testing which increased the development pace by 30%
- Developed clean and documented APIs following RESTful guidelines, using Flask and Swagger
- Built a DevOps CI/CD pipeline with Travis CI and IBM Toolchain, to test and deploy every PR into Cloud Foundry

Novelty Interactive, NYC, Software Engineer — Dec, 2019 - June, 2020

- Created interaction models of virtual 3D assets for a VR platform
- Built class and data models to capture the 44 English phonetics that corresponding to these 3D assets
- Developed evaluation and feedback loops to create customized interactions between user and the platform

Learning Analytics, Data Engineer — NYU, Spring 2020

- Discovered correlation patterns and association rules between influencing factors and academic metrics
- Developed predictive models to predict the degree of academic success based on these factors
- Achieved a 97% prediction rate for attendance, 92.83% for Math and English score and 85% for graduation rates