

Goutham Thota

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EDUCATION

Master's in Computer Science & Engineering, State University of New York at Buffalo

June 2020

Bachelor's in Computer Science, Indian Institute of Information Technology Vadodara

May 2018

SKILLS

Development	Java, Python (Beautiful Soup), R, C, HTML5, CSS, Javascript (ReactJS), PHP (phpMyAdmin)
Database	MySQL, SQLite
Cloud	AWS (EC2, Lambda, CodePipeline, SDK, EMR)
Tools	Git, Zenhub, Robot Operating System (ROS), MATLAB, Ubuntu, Bash, Apache (Hadoop, MapReduce), Unix
Concepts	Multi-threading, Socket Programming, Object-oriented programming (OOPS), CI/CD
Methodologies	Agile (Scrum, TDD)

EXPERIENCE

AWS Developer Intern at Com Expo Cyber Security | AWS CodePipeline, CodeCommit, CodeDeploy, CodeBuild 5/19 - 8/19

- Increased work efficiency by 17% by building a serverless/Lambda CI/CD pipeline.
- Created an API gateway and Lambda using CloudFormation by executing the changeset.
- Deployed Lambda using CodeDeploy, CI using CodeBuild, and CD using CodePipeline.
- Increased work efficiency by 17% by building a CI/CD pipeline which made use of Lambda functions.
- Wrote Lambda function in Python using boto3 to get required attributes of AWS resources from API Gateway as an endpoint.
- Assigned the required number of IAM roles and wrote necessary inline policies.
- Hosted Git repositories using CodeCommit.

Research Intern at Edge Exploration of Graphs, Dr. Barun Gorain | [GitHub](https://github.com) | Algorithm design, Discrete math 12/17 - 4/18

- Identified a tighter lower bound of $\Omega(n^{8/3})$ over $\Omega(n^2)$ on the edge exploration time of an agent.
- Delivered the above minimum edge exploration time by developing a new graph construction.
- Developed a completely new and unique graph construction and graph in order to arrive at the tighter lower bound.

PROJECTS

Android App Based on Amazon Dynamo | [GitHub](https://github.com) | Java, SQLite, Android Studio, Multi-threading, Socket Programming Spring 2020

- Built a simple version of Amazon Dynamo (highly available key-value store) that includes partitioning and replication quorum.
- Maintained reliability by handling failure and recovery of nodes so that availability is not lost as per the CAP theorem.
- Implemented partitioning/repartitioning, ring-based routing, and node joins in a distributed hash table.
- Each message is stored in multiple nodes, providing both availability and linearizability at the same time.

Student Peer Evaluation System | [GitHub](https://github.com) | ReactJS, JavaScript, MySQL, PHP, phpMyAdmin, Bash, Linux Server, Python

- Satisfied all client requirements by working 3x the normal speed by building a web application for peer evaluations using Agile.
- Developed a significant number of user stories to gather features required by the client and also wrote tests for them.
- Led the development of an interesting and catchy Sales video to advertise the project to potential clients.
- Created nearly 20 user stories to capture each feature required by the client.
- Achieved a 100% success rate with 20 user acceptance tests using test-driven development and agile.

Parallel processing of Big-Data | [GitHub](https://github.com) | Python, Beautiful Soup, Hadoop, Map Reduce, Tableau, EMR Spring 2019

- Extracted insight on big data extracted from sources (Twitter, New York Times, Common Crawl) using MR jobs in AWS.
- Predicted current trends through analysis and created visualization dashboards on Tableau.

EC-2 Backup Tool | [GitHub](https://github.com) | Python Fall 2019

- Created required optional and positional arguments for the tool using argparse module in Python.
- Managed and retrieved attributes of AWS EC2 instances by utilizing AWS SDK - Boto3.
- Backed up 100's of GB data to EBS volume in the AWS cloud by building a Unix CL tool.
- Saved 5 mins on each backup by creating EC2 instances and attaching EBS volumes using Python functions.

CERTIFICATION

AWS Certified Cloud Practitioner | [Certificate](https://aws.amazon.com/certification/certificate/)

Expires 2023