AGNILA BARUA

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TECHNICAL SKILLS

Languages: Python, C/C++, SQL (My, PostgreSQL), NoSQL (DynamoDB), JavaScript, HTML/CSS, LaTex
Numerical Analysis & **Project Management Tool**: MATLAB; Jira, Trello
Design Software: Cloud Craft, draw.io, PSPICE, Cadence Virtuoso, AutoCAD, OptiSystems 14.1
Operating System: Windows, Amazon Linux 2023, Ubuntu, Windows Subsystem for Linux
Developer Tools: Git, SourceTree, Amazon Web Service Cloud Platform, VS Code, Code::Blocks, MikTex
Web Server & **Database**: Apache, Tomcat, Ngnix; RDS (MariaDB, MySQL), Non-Relational DS

EXPERIENCE

Amazon Web Service (AWS) Cloud Practitioner, AWS Trainee | May 2023 – Aug. 2023
Youth Employment Service   *Toronto, ON*

- Built App Environment in Linux OS with EC2, VPC, public & private subnet,Autoscaling and ELB
- Created schemas in MariaDB, Aurora, DynamoDB with queries, managed Network & Instance security
- Automated Continuous Deployment with Cloudformation; used pyhton; containrization of app; IoT
- Built several projects in AWS and designed in draw.io with cost calculation in Cloud Craft, AWS Calculator

Next Generation Wireless Communication Research Assistant | Jan.2020 – Jan. 2023
University of Windsor   *Windsor, ON*

- Familiarization with NR & LTE 3GPP. Exploring 5G gNodeB, RAN, Massive MIMO, Index Modulation
- Studied the behaviour of OFDM, OFDM-IM and MM-OFDM-IM, methodology, characteristics & performance
- Developed an Energy Efficient New MM-OFDM-IM system with Novel Indexing Methodology, derived equations
- Designed the system in MATLAB with desired characteristics and perfromance to outstand OFDM & IM variants
- Thesis book was written in LaTex

Graduate Teaching Assistant | Jan.2019 – Dec. 2019
University of Windsor   *Windsor, ON*

- TA Courses: *Circuit Analysis* & *General Engineering Mathematics*
- Assisted professors, conducted tutorials and lab classes in MATLAB, PSPICE
- Aided Undergraduate and Graduate (M.ENG.) students, Proctored Exam, developed solutions and marked papers

PROJECTS

Static and Dynamic Web App | *frontend, backend, AWS, Database, REST API, draw.io* | June 2020 – Present

- Developed an web application using HTML, CSS, TailwindCSS, JavaScript as frontend
- Hosted the static version of web app on S3 bucket and registered DNS with Route53
- Simple backend was done in Supabase with coloumner RDS and REST API call
- On process: Hosting the backend on AWS using 3 tier network with RDS, Autoscaling, VPC, EC2, Amazon Linux

Miscellaneous Projects | *Git, SourceTree, Jira, AWS, VS code, CI/CD pipeline* | May 2018 – May 2020

- Thesis code tranision in C++ (On process)
- IoT data analysis thorough Amazon IoT core and get notification through SNS via email or phone
- Explored ways to visualize GitHub collaboration in a team with SourceTree, Jira for project management

PUBICATION & AWARDS

Publication | Feb. 2023 & Oct. 2018

- A Novel Multi-Mode OFDM with Index Modulation published in ProQuest, Scholarship Uwindsor
- Performance Investigation of OFDM-FSO System under Diverse Weather Conditions of Bangladesh in IJECE

Higest Academic Excellence Awards | Jan. 2022 & Jan. 2020

- A.R. AND E.G. FERRISS AWARDS
- Golden Key International Honors Society

Courses

AWS re/Start Program | *AWS, Linux OS, SQl, NoSQL, Python, Docker, Git*   May 2023 – August 2023
- Built IT fundamental skills, including: working knowledge of Linux OS, writing scripts in Python and Shell
- Learned how to apply core AWS services in the area of compute, storage and networking, including EC2, S3, IAM, VPC, Lamda, Cloud Formation, RDS and Route 53

Graduate | *MATLAB, PSPICE, OptiSystems, Code::Blocks, VS Code, MikTex*   Jan 2019 – April 2020
- Digital Communication; Stochastic Process; Wireless Communication; Estimation, Tracking, Navigation
- Information Transmission System, Digital Signal Processing, Engineering Technical Communication

Education

AWS re/Start Program   May 2023 – Aug. 2023
IT & Cloud Technology Specialist | Youth Employment Service (YES)   *Toronto, ON*

MASTER OF APPLIED SCIENCE (M.A.Sc.)   Jan. 2019 – Dec. 2022
Electrical Engineering | University Of Windsor   *Windsor, ON*

BACHELOR OF SCIENCE (B.Sc.)   Jul. 2011 – Feb. 2017
Electrical & Electronics Engineering | Chittagong University of Engineering & Technology   *Bangladesh*

Reference

Available upon request.