

# AGNILA BARUA

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## TECHNICAL SKILLS

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**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

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**Amazon Web Service (AWS) Trainee, AWS Cloud Practitioner** 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 python; containerization 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

- Communicate with managers to set up campus computers used on campus
- Assess and troubleshoot computer problems brought by students, faculty and staff
- Maintain upkeep of computers, classroom equipment, and 200 printers across campus

**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

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**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

**not sure** | *Git, SourceTree, Jira, AWS, VS code, CI/CD pipeline* May 2018 – May 2020

- Thesis code in C++
- IOT/ Dojo lab/ C++/ Docker/ Cloudformation
- Implemented continuous delivery using TravisCI to build the plugin upon new a release
- Explored ways to visualize GitHub collaboration in a classroom setting

## PUBICATION & AWARDS

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**Publication** Feb. 2023 & Oct. 2018

- A Novel Multi-Mode OFDM with Index Modulation
- Performance Investigation of OFDM-FSO System under Diverse Weather Conditions of Bangladesh

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

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

## COURSES

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- 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, Lambda, 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

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- 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