

# 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

## EDUCATION

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**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*

## EXPERIENCE

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**Undergraduate Research Assistant** June 2020 – Present  
*Texas A&M University College Station, TX*

- Developed a REST API using FastAPI and PostgreSQL to store data from learning management systems
- Developed a full-stack web application using Flask, React, PostgreSQL and Docker to analyze GitHub data
- Explored ways to visualize GitHub collaboration in a classroom setting

**Graduate Teaching 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

**Next Generation Wireless Communication Research 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 in solving problems throughout the course
- Proctored Exam and marked exam papers for all possible solutions, developed solutions

## PROJECTS

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**Gitlytics** | *Python, Flask, React, PostgreSQL, Docker* June 2020 – Present

- Developed a full-stack web application using with Flask serving a REST API with React as the frontend
- Implemented GitHub OAuth to get data from user's repositories
- Visualized GitHub data to show collaboration
- Used Celery and Redis for asynchronous tasks

**Simple Paintball** | *Spigot API, Java, Maven, TravisCI, Git* May 2018 – May 2020

- Developed a Minecraft server plugin to entertain kids during free time for a previous job
- Published plugin to websites gaining 2K+ downloads and an average 4.5/5-star review
- Implemented continuous delivery using TravisCI to build the plugin upon new a release
- Collaborated with Minecraft server administrators to suggest features and get feedback about the plugin

## COURSES

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**AWS re/Start Program** | *MATLAB, PSPICE, OptiSystems, Code::Blocks, VS Code, MikTex* June 2020 – Present

- Digital Communication; Stochastic Process; Wireless Communication; Estimation, Tracking, Navigation
- Information Transmission System, Digital Signal Processing, Engineering Technical Communication

**Graduate** | *MATLAB, PSPICE, OptiSystems, Code::Blocks, VS Code, MikTex* June 2020 – Present

- Digital Communication; Stochastic Process; Wireless Communication; Estimation, Tracking, Navigation
- Information Transmission System, Digital Signal Processing, Engineering Technical Communication