

# NAYMUL HOSSAIN

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## SKILLS

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- **Languages:** Python, C++, Perl, JavaScript, Typescript, Go, Java, C, R, MATLAB, Bash, SQL
- **Tools:** Git, Docker, AWS, Agile, Jira, Jenkins, Postman, Apache, Dialogflow
- **Frameworks & Databases :** Angular, React, Express, Node.js, Spring Boot, MongoDB

## EXPERIENCE

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### Navblue, an Airbus Company

*Software Developer (Optimization, AI and ML Chapter)*

Apr 2022 – Present

Managed AWS infrastructure, streamlined crew scheduling, coordinated deployment pipelines

- Developed crew scheduling algorithms leveraging Mixed Integer Linear Programming in C++
- Optimized flight crew pairing software, achieving 15% faster processing with code profiling
- Created an interface to access knowledge bases in Confluence and Google Docs using LLM
- Preprocessed documents into manageable chunks using Amazon EC2, optimizing cost
- Tokenized documents with AWS Bedrock's embedding model and stored vectors in AWS S3
- Implemented a pipeline to dynamically update the vector database with new embeddings
- Applied Retrieval Augmented Generation for contextual inferences from user queries
- Utilized API Gateway to route API requests for frontend and product integration
- Enhanced operational efficiency through seamless integration and validation with Postman
- Executed database operations with Perl & SQL, orchestrated deployments with Jenkins & Docker

### Competers Inc.

*Software Engineer (Full-Stack Engineer)*

Aug 2022 – Dec 2022

Transformed microservices using AWS serverless framework, reducing cost by improved scalability

- Engineered new features in a Node.js environment with Angular for the front-end
- Implemented Express.js for the back-end, resulting in a 15% increase in user engagement
- Restructured SOAP microservices to REST APIs with .NET framework
- Utilized Test-Driven Development to enhance system efficiency and reduce errors
- Optimized costs using microservices as AWS Lambda functions, achieving scalability

### bKash Limited

*Software Engineering Intern (Backend Engineer)*

May 2019 – Aug 2019

Designed secure RESTful APIs with integrated conversational agent for customer satisfaction

- Implemented secure authentication with Django, ensuring user data privacy and access controls.
- Integrated Dialogflow bot via Facebook SDK, using AWS ElastiCache for enhanced engagement

## EDUCATION

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### University of Waterloo

Sep 2017 – Aug 2021

### Bachelor of Mathematics, Honours Computational Mathematics

**Minors:** Statistics, Computer Science, Combinatorics & Optimization

## CERTIFICATIONS

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**AWS CCP | Supervised Machine Learning | Django | MEAN Stack(Angular, Node.js)**

## PROJECTS

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- **Post Feed:** A social media feed with MEAN stack hosted on AWS EBS
- **Daily Taskmate:** A task manager app built with Django REST framework, deployed on Heroku