



MOHAMMAD ABDUL AHAD CHOWDHURY

Full-Stack Web Developer • Machine Learning and Big Data Enthusiast

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Experience

Software Engineer

20 April 2021 – 10 May 2022

Apollo International

Sydney, NSW, Australia

Part-time employment for developing the in-house CRM solution.

Responsibilities:

- Development of the frontend project with React.js, Redux.js, Next.js, Material UI etc.
- Development of the backend project with ASP.NET Core, Entity Framework Core, PostgreSQL, Redis etc.
- Unit testing of the backend project with xUnit.
- Unit and end-to-end testing of the frontend project with Jest, RTL, and Playwright.
- Integration and deployment of the solution on a VPS instance using SSH, Nginx, PM2 etc.

Junior Software Engineer

1 February 2019 – 31 January 2020

Dynamic Solution Innovators Ltd.

Dhaka, Bangladesh

Full-time employment for developing enterprise web applications, following agile (scrum) methodology.

Projects:

- The [OpenCRVS](#) project ([project details](#), [technical details](#), [commits](#)).
- The full-stack solution for [Olwel](#), a healthcare startup ([project details](#), [technical details](#)).

Responsibilities:

- Development of features and bug-fixes for the frontend projects with React.js, Electron.js, Redux.js, Material UI, Formik etc.
- Development of features and optimizations for the backend projects with Node.js, Hapi.js, MongoDB, Elasticsearch, GraphQL, Socket.io, Docker, AWS S3 etc.
- Optimization of RethinkDB queries and database migration scripts.
- Composition of unit and end-to-end tests with Jest, Enzyme, Mocha, and Cypress.

Research Assistant

1 November 2016 – 30 April 2018

North South University

Dhaka, Bangladesh

Part-time employment under the Department of Environmental Science & Management ([website](#)) for developing NODES, an airline management system ([news article](#)).

Responsibilities: Development of the frontend of NODES with Windows Forms (.NET Framework).

Education

Master of Data Science

9 October 2023 – 20 September 2024

Sydney Polytechnic Institute | WAM: 74.84%

Sydney, NSW, Australia

Capstone project: Credit Card Fraud Detection Using Deep Learning and Big Data Analytics.

Notable Coursework: Machine Learning and Data Mining, Data Visualisation and Tools, Natural Language Processing and Applications, Big Data Infrastructure and Processing, Artificial Intelligence and Innovation.

Bachelor of Science in Computer Science & Engineering

January 2014 – August 2018

North South University | CGPA: 2.98/4.00

Dhaka, Bangladesh

Capstone project: Fruit Image Classification Using Convolutional Neural Networks.

Notable Coursework: Software Engineering, Compiler Construction, Artificial Intelligence, Theory of Fuzzy Systems ([Repositories on GitHub](#)).

Last edited on August 8, 2024. The latest version of this document is available at pia.sh/resume

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Technical Skills

Languages: C#, JavaScript, TypeScript, Python, SQL, C, R.

Backend: ASP.NET Core, Entity Framework Core, Dapper, SignalR, Node.js, Express.js, Auth.js.

Frontend: Tailwind CSS, React.js, Redux.js, Next.js, Solid.js, Vue.js, Svelte, Astro, Blazor, PWA.

Database: MySQL, PostgreSQL, SQL Server, MongoDB, Redis, SQLite, SurrealDB.

Machine Learning: NumPy, Pandas, Matplotlib, NLTK, Scikit-learn, Tensorflow/Keras.

Big Data: Apache Hadoop (HDFS, MapReduce, YARN), Apache Spark.

DevOps: Docker, PaaS, AWS (S3, EC2, Lambda, SQS, SNS, DynamoDB), CI/CD, SSH, Nginx.

Projects

KonSchool | *Web application, Recommendation system* Hosted on [Azure](#) | GitHub: [KonSchool](#)

- Fuzzy-AHP-based recommendation system for secondary schools in Bangladesh.
- Tech stack: ASP.NET Core, MongoDB, xUnit, Moq.
- Status: completed, with unit and e2e tests at 95% coverage.
- Another version is in development, with separate web APIs and a frontend developed with Blazor.

Connery | *Web application, Deep learning* GitHub: [Connery](#)

- Fruit image classifier using convolutional neural networks.
- Tech stack: ML.NET, ASP.NET Core.
- Status: complete, offline.

Winston | *Machine learning, Deep learning* GitHub: [Winston](#)

- Implementation of neural networks from scratch.
- Tech stack: C, CMake.
- Status: in progress.

Vardict | *Library, Package* [NPM package](#) | GitHub: [Vardict](#)

- CLI argument parser.
- Tech stack: Node.js.
- Status: completed.

References

Available on request.