

# Mohammad Abdul Ahad Chowdhury

Bangladeshi graduate student of data science at Macquarie University, with professional experience in full-stack web development. Currently looking for a part-time employment or an internship in the IT industry.

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## Education

### Master of Data Science

#### Macquarie University

New South Wales, Australia

February 2020 – December 2021 (Tentative)

Notable coursework: [Data Science](#) • [Big Data](#)

### Bachelor of Science in Computer Science and Engineering

#### North South University

Dhaka, Bangladesh

January 2014 – August 2018

Capstone project: Fruit Image Classification

Using Convolutional Neural Networks

Coursework: [AI](#) • [Theory of Fuzzy Systems](#) • [Computer Graphics](#) • [Software Engineering](#) • [Microprocessor Interfacing & Embedded System](#)

## Technical Skills

- ❑ **Programming languages:** C#, JavaScript (ES6), TypeScript, Python, C, Java, C++
- ❑ **Web development**
  - ASP.NET Core, Entity Framework Core, Blazor, Identity Framework
  - Node.js, React.js, Angular, Webpack, Express.js, Hapi.js
  - Socket.IO, ReST, GraphQL, Microservices architecture
- ❑ **Desktop app development:** Windows Forms, WPF, UWP, Electron.js, JavaFX
- ❑ **Data science:** Jupyter Notebook, NumPy, Pandas, Matplotlib, NLTK, Scikit-Learn
- ❑ **Database systems:** MongoDB, MS SQL Server, PostgreSQL, SQLite, RethinkDB
- ❑ **DevOps:** Docker, MongoDB Atlas, Heroku, Azure App Service, Travis, AppVeyor
- ❑ **Development methodology:** Agile (scrum)

## Publication

- ❖ Selection of Most Suitable Secondary School Alternative by Multi-Criteria Fuzzy Analytic Hierarchy Process. ([Springer/AISC, 2019](#))
- ❖ Fruit Image Classification Using Convolutional Neural Networks. ([IGI Global/IJSI, 2019](#))
- ❖ Fusion of BWM and AHP MCDM Methods to Choose the Most Suitable Secondary School for an Individual in the Context of Bangladesh. ([World Scientific/VJCS, 2019](#))

## Open Source Contribution

- ★ [sandoche/Darkmode.js](#)
- ★ [howtocode-com-bd/git.howtocode.com.bd](#)
- ★ [devsonket/devsonket.github.io](#)

## Work Experience

### Junior Software Engineer at Dynamic Solution Innovators Ltd.

01 February 2019 – 31 January 2020 • Dhaka, Bangladesh

An enterprise software company [\[website\]](#). Worked here on Node.js-based web applications.

- ❖ **Project: Olwel** • 01 August 2019 – 31 January 2020
    - Description:** Olwel is a startup that provides essential doorstep healthcare. [\[website\]](#)
    - Environment:** JavaScript, Hapi.js, React.js, Electron.js, Socket.IO, RethinkDB
    - Contribution:**
      - ✓ Implemented attendance recording system for doctors and call-center operators.
      - ✓ Added search-by-date and search-by-name for doctor visits (a.k.a. 'missions').
      - ✓ Implemented sending mission-specific notes to the doctor on the mission.
      - ✓ Made missions-list-view component load faster by 50% by optimizing API calls.
      - ✓ Wrote unit tests (Mocha); added test coverage (Istanbul).
      - ✓ Wrote scripts for generating reports on missions, with customized anonymization of patients' personal data, for a research on the 2019 dengue outbreak in Dhaka.
  - ❖ **Project: OpenCRVS** • 01 March 2019 – 31 July 2019
    - Description:** Civil Registration and Vital Statistics (CRVS) software. [\[website\]](#)
    - Environment:** TypeScript, Hapi.js, React.js, GraphQL, MongoDB, Docker (Swarm)
    - Contribution:**
      - ✓ Implemented lock-screen PIN setting policy on the client-side software.
      - ✓ Implemented lock-screen timeout using browser's page visibility API.
      - ✓ Added conditional validation for co-dependent form-fields.
      - ✓ Added offline data storage for form drafts that uses browser's localStorage API.
      - ✓ Wrote unit tests (Jest) and integration tests (Enzyme); refactored code to increase test coverage.
- [\[View commits on GitHub repo\]](#)

### Research Assistant at North South University

01 November 2016 – 31 March 2018 • Dhaka, Bangladesh

Part-time employment under the Department of Environmental Science and Management ([website](#)) for a research project titled "Satellite-based Navigation in Civil Aviation: Performance Evaluation in the Context of Bangladesh" [\[News article\]](#)

**Contribution:** Developed the desktop application (using Windows Forms) for NODES, an airline management software that uses linear optimization to maximize usage of resources.

## Personal Projects

- ❑ **Connery** – ML.NET, TensorFlow.NET, ASP.NET Core [\[API \(Swagger\)\]](#) [\[GitHub repo\]](#)  
Fruit-image-classifier that uses convolutional neural network.
- ❑ **Kon School?** – ASP.NET Core, MongoDB [\[Azure • Heroku\]](#) [\[GitHub repo\]](#) [\[Docker\]](#)  
Fuzzy-AHP-based recommendation system for secondary schools in Bangladesh.
- ❑ **Cinegma** – ML.NET, ASP.NET Core [\[GitHub repo\]](#)  
Movie recommendation system that uses matrix factorization. *WIP*.
- ❑ **Winston** – Cmake [\[GitHub repo\]](#)  
Implementation of neural network from scratch, in C. *WIP*.
- ❑ **Vardict** – Node.js, Typescript [\[NPM package\]](#) [\[GitHub repo\]](#)  
A basic Node.js package for parsing labeled CLI arguments.
- ❑ **MqFind** – Node.js, TypeScript, Hapi.js, React.js [\[GitHub repo\]](#)  
A web app that shows listings of accommodation near Macquarie University.
- ❑ **AddLicenseHeader** – .NET Core [\[NuGet package\]](#) [\[GitHub repo\]](#)  
A CLI tool that adds a license header on top of each source file of a directory.
- ❑ **Libgyor** – MongoDB, Express.js, Angular, Node.js (MEAN stack) [\[GitHub repo\]](#)  
A simple CRUD web application for managing a collection of books.