

AMIT DUTTA

303 E 6th st Reno NV

775-219-7559 — amitdutta121@gmail.com — <https://github.com/Amitdutta121>

BIOGRAPHY

I am a Ph.D. student at the University of Nevada, Reno. My research focuses on adaptive learning systems, where I combine evolutionary computing and machine learning to develop innovative solutions. This area has become my key passion and research focus. Apart from it I am an energetic and ambitious individual with over three years of experience as a full-stack developer, including mobile app development using React Native. My primary interest lies in machine learning, particularly in reinforcement learning and adaptive learning system.

EDUCATION

PhD IN Computer Science And Engineering

August 2023 - Current

University of Nevada, Reno

Research Focus: Adaptive learning systems leveraging evolutionary computing and machine learning

MSc IN Computer Science And Engineering

January 2021 - February 2023

BRAC University

Current CGPA: 3.50

Thesis: Recurrent Proximal Policy Optimization Reinforcement Learning for Optimal Block Formation in Bitcoin Blockchain Network

BSc IN Computer Science And Engineering

January 2016 - October 2020

BRAC University

Thesis: Proximal policy optimization for profitable trading

Supervisor: Mahbubul Alam Majumdar, PhD

Professor, Department of CSE, Brac University

WORK EXPERIENCE

University Of Nevada Reno

August 2023 - Present

Research Assistant

- Developed a novel algorithm for an adaptive learning system using neural network and evolutionary computing.

Brainstation23

October 2021 - July 2023

Senior Software Engineer

- My main responsibilities are to develop apps with **react-native** and build websites with react. I also manage and mentor several developers. I have used **firebase** and **Aws amplify** for authentication, OTA platform like **codepush** and **Stripe** and **sslcommerz** for payment gateway. I also worked on CI/CD for react and react-native Apart from these also developed several internal libraries for react-native.

Sweetitech

October 2020 - November 2021

Software Engineer

- Developed multiple **React** and **React-native** applications and several backend applications with **Java Spring boot** and **MySQL**.

BRAC University Computer Club

2018 - 2019

Assistant Director

- Developed a club management software with **JAVAFX** also created several poster, banner and flyer with **Adobe Photoshop**, and several videos and Animations with **After Effect** .

NokshaIA

2017 - 2018

Game Developer

ACHIEVEMENTS

1st palace in Datathon at Dhaka International University,Bangladesh

11th in BRACU programming contest - Spring 2018

9th in BRACU programming contest - Fall 2018

PUBLICATION

1. Daas, B., & Dutta, A. (2014). Electromagnetic dispersion of surface plasmon polariton at the EG/SiC interface. *Journal of Materials Research*, 29(21), 2485-2490. doi:10.1557/jmr.2014.266
2. Amit Dutta (2023) Dutta, A., Rafin, N. I., Dewan, M. A. A., Alam, M. G. R. (2024). ROBB: Recurrent Proximal Policy Optimization Reinforcement Learning for Optimal Block Formation in Bitcoin Blockchain Network. *IEEE Access*, 12, 31287-31311. Data Using Hybrid Neural Network
3. Dutta, A., Louis, S. J. (2025). Evaluating Adaptive Training for Nautical Rules of the Road. In *International Conference on Human-Computer Interaction* (pp. 19-34). Springer, Cham.

PROJECTS

- ***Proximal policy optimal based algorithm for trading*** ([Github](#))

The project aims at analysing the financial market and trading efficiently in a particular company using reinforcement learning algorithm and using custom OpenAI gym environment.

- ***Food recommendation system using KNN*** ([Github](#))

This project represents how we can use **KNN(k nearest neighbor)** algorithm to build a food recommendation system.

- ***Use ResNet-50 to predict bangla handwritten grapheme*** ([Kaggle](#))

This project represents how we can use most popular imagenet architectures for generalized jobs. In this project **ResNet-50** architecture has been used with transfer learning to predict bangla handwritten grapheme.

- ***Sharebike*** ([Link](#))

- **React-Native**

- It's an whitelabel solution for bike sharing. I have used react-native, firebase, stripe and codepush. Also did the CI/CD for both android and IOS using fastlane and circleci. For state management, I used redux, and for async calls, I used a custom middleware.

- Also worked with a team of developers and mentored other developers.

- *Upay Website* ([Link](#))
 - Nextjs
 - This project represents upay app, charges and how it works on web.
 - In this project, I created a nextjs app from a Figma design and also implemented dynamic content.
- *Shared HR Web* ([Link](#))
 - ReactJS, Redux, redux-saga
 - SharedHR is a system where you can manage employees of multiple companies from a single system.
 - Created with reactjs and for state management used redux and for async calls used redux-saga
- *ERP Management App* ([Android](#)) ([IOS](#))
 - React-Native, Redux, redux-saga
 - ERP is a system by which you can manage and show employee, HR and inventory stats.
 - In this project I used **react-native** and for state management I used **redux** .Also some key features of this app is HR, Inventory, Sales, Purchase And the app is also live in both **android** and **apple** store.
- *Technoworth HR and ERP* ([Android](#)) ([IOS](#))
 - React-Native
 - Technoworth HR is a full HR management solution.
 - In this project I used **react-native** and for state management I used **redux** to create the app. This is an full fledged **erp** solution for any company. The app is also live in both **android** and **apple** store.
- *PharmaFlexi* ([Android](#))
 - Android
 - PharmaFlexi is a full medicine management system with customized reports for sales..
 - In this project I used **Native-android** to create the app. also this is a complete cloud-based platform with a mobile-friendly operation flow that can handle all day to day activities in a local pharmacy store

REFERENCES

Md. Golam Rabiul Alam, Professor at BRAC University - rabiul.alam@bracu.ac.bd

Biplob Daas, Product Development Engineer at Intel Corporation - biplob.k.daas@intel.com

Iftekharul Mobin, Assistant Professor at BRAC University - Iftekharul.mobin@bracu.ac.bd