Ryan Biswas

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Overview

I am a highly motivated recent University of Virginia graduate seeking an entry level position as a software developer. My greatest strengths include my ability to rapidly learn new technologies and the ability to diagnose and solve problems independently. In the past few months, I have been mainly focusing on web development and data science and have been working on projects that integrate both fields.

Education GPA 3.46

University of Virginia - B.S. Computer Science | Data Science Concentration - Charlottesville, VA **July 2022**

- **Coursework**: Data Structures, Algorithms, Discrete Math, Cybersecurity, Machine Learning, Regression Analysis, Computer Architecture, Software Testing, Web Development, Databases, Operating Systems, Game Development, Probability

Northern Virginia Community College – AS. Computer Science – Magna Cum Laude - Reston, VA **May 2020**

Skills

Technologies: Angular, React, Phaser3, HTML, CSS, JavaScript/TypeScript, MySQL, Google Cloud Firestore, & React-Native.

Technical Languages: Python, C/C++, Java, C#, Arduino, Linux/bash, Git, MATLAB, & X86 Assembly.

Spoken Languages: Fluent English, Fluent Bengali, Advanced Hindi, Intermediate French, & Basic Chinese.

Work Experience/Research

SHIFT Research Lab - Research Assistant - Charlottesville, VA **June 2020 – September 2020**

- Constructed nano drones and conducted test runs on an indoor course with high radio interference. Conducted research on decentralized drone swarm route planning, obstacle avoidance, and high-interference radio communications.

NOVA Loudoun Math Lab - Math Tutor – Sterling, VA **September 2019 – June 2020**

- Tutored students in Calculus 1/2/3, Differential Equations, Linear Algebra and Statistics. I helped organize and develop a program that allowed other tutors to remotely offer private sessions during the COVID-19 pandemic.

Pac-Atlantic – eCommerce Business - Market Researcher/Supply Chain Manager – Fairfax, VA **October 2015 – Present**

- Co-Founded a second-hand computer part re-selling business and later expanded to selling card games, mats, live plants, and exotic aquarium shrimps on eBay store. Earned over $20,000 in lifetime sales.

Projects

LanguaFranca

- Currently developing a Firefox browser plug-in in JavaScript for learning foreign languages that algorithmically swaps in foreign words and sentences in text-based web pages. The goal is to decipher the foreign text using context clues from the surrounding words which are in the user's native language. This attempts to emulate how children would learn a language for the first time.
- This plug-in aims to simplify studying, learning, and remembering languages by naturally integrating into a person's regular web-browsing routine.

PMDB – Personal Movie Database

- Developed a movie/tv show cataloging web app using React and TMDB API. Hosted the front-end on Google Cloud Firebase and connected it to Google Cloud Firestore NoSQL database.
- Currently developing a RESTful API Express server that connects to a Python script that generates movie and tv show suggestions based on a what the user has already watched. The back-end is hosted on Heroku Platform.

FarmBase

- Developed a full-stack database management web app for a farmer using Angular framework for the front-end and NodeJS Express server and MySQL database for the back-end.
- I designed a MySQL database that contains 7 3NF tables that are vital to the day-to-day operation of a farm and provides a user-friendly interface for making various custom SQL queries.

TouchTyper

- Developed a web-based touch-typing practice game using Phaser JavaScript framework. The game is designed to target specific typo-prone areas of the keyboard by using curated word lists that focus on specific keyboard key areas.

Embedded Systems

- Programmed a basic image editing program on an ATmega32U4 microcontroller using C. The microcontroller received input from a set of mechanical knobs to draw on an OLED screen.
- Developed a flat-plane 360-degree distance mapper by attaching a LiDAR sensor on top of a spinning motor. The sensor mapped different distance readings to a graph, which once charted, displayed a 2D image of the surroundings.