Divij Dhiraaj

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Education

McMaster University 3rd year — Hamilton, ON
B.A.Sc. Computer Science – Computer Science — *Aug 2021 – May 2025*
Gpa: 3.6 , Awards: Dean's Honour List

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, Dart
Frameworks: ReactJS, ThreeJs, Node, WordPress, Flutter, Electron, Express.js/Rest API
Developer Tools: Git, FireStore, VS Code, Visual Studio, Android Studio, PyCharm, IntelliJ, Vim/NVim, Eclipse, XCode, Power Automate, IOS dev, Android Dev, UI/UX, Unity, WordPress, Figma, Adobe XD, Linux, Windows, Power BI, Bash

Experience

IT Specialist — July 2022 – September 2023
Systems Department, Office of the Registrar — *McMaster University, ON*

- Created software needed by departments to function optimally, such as a Bulk SMS sender leveraging **Python** and **Twilio's API** to send RSVP reminders to thousands of graduates, resulting in **70% more** convocation RSVPs
- Deployed a photo ID upload tracker using **Python** and displayed it using **Microsoft Power Automate** to track the amount of photo uploads decreasing server load by **30%**
- Spearheaded a Python-based **SQL** automation project, using the **agile** methodology, that replaced a manual Excel process for convocation data, transforming a four-day task into under a second and achieving a remarkable **99% reduction** in processing time
- Assisted with the Office of the Registrar's website updates, decreasing render time by **300ms**.
- Analyzed financial spreadsheets and organized them in a presentable manner using PowerBI for 10 departments, with the intention of presenting to the Dean

Projects

Project Pythia | ***ReactJs, ThreeJs, Python, TensorFlow*** — Oct 2023 – Nov 2023

- Conceived a machine learning model that leverages data from the DSCOVR satellite to predict the KP index, a critical space weather parameter, resulting in a model **accuracy of 89+%**
- Selected as the global nominee representing Hamilton in the Global Space Apps Hackathon out of **300+ submissions**
- Co-authored a **5-page** detailed research paper to document the model's methodology, findings and implications
- Implemented an interactive and performant ThreeJS **website** that displays model predictions dynamically with a render time of **under 550ms**

Boids | ***Python**, Pygame, Classes/Objects, Simulation* — May 2022 – July 2022

- Developed and implemented a Python-based simulation using pygame library to replicate the emergent behavior of Boids, utilizing concepts from cellular automaton and achieved a particle count of **3000+** with a **60+ FPS** render rate
- Utilized proper OOP principles such as using classes and objects to build the project
- Implemented intuitive and interactive UI elements to customize the behaviour and quantity of boidal formations

TickIT | ***Dart, Flutter, Firebase, IOS, Android*** — June 2020 – Feb 2021

- Developed a full-stack mobile application using the Flutter Framework, connecting it to a backend Firestore server to enable cloud syncing and deployed it on the Google Play Store
- Enabled users to add and remove tasks seemlessly, with all their tasks synced to the cloud and available on all their devices along with a Sign-in page and User Authentication
- Tailored a variety of aesthetic and minimalistic themes that users can select from and change on the fly

Brevity | ***Python, AssemblyAI*** — Jan 2021 – Feb 2021

- Created a lecture summarizing terminal interface that takes in a lecture video, converts it to a transcript and feeds that transcript to AssemblyAI to get a customizable summary back
- During the COVID lockdown period, students employed this program due to the prevalence of recorded lectures, saving around **2 hours per lecture**