

SIDHARTH BAVEJA

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EDUCATION

Texas A&M University

College Station, TX

Master of Computer Science

May 2024

- **Relevant Courses:** Data Mining & Analysis, Intelligent Systems & Robotics, Pattern Analysis
- Awarded **Entrance Fellowship Scholarship**

University of Waterloo

Waterloo, Canada

Bachelor of Applied Science, Honors Electrical Engineering

May 2022

- **Relevant Courses:** Algorithms & Data Structures, Algorithm Design & Analysis, Cooperative & Adaptive Algorithms
- **CGPA:** 3.79/4.00 (87.10/100); Graduated **with Distinction**; Awarded **President's Scholarship**

WORK EXPERIENCE

Dell Technologies

Ottawa, Canada

Software Engineering Intern

Sep – Dec 2021

- Developed acknowledgment & signal integrity modules for Physical Uplink Control Channel as per **3GPP** standards
- Enhanced Distributed Unit (DU) signal & performance metrics, reducing new feature development time by **33%**
- Designed Dead Code Analysis tools using **C++** compiler options & **Bash** scripts, removing **20K+** lines of unused code

IBM

Markham, Canada

Software Engineering Intern

Jan – Apr 2021, May – Aug 2020

- Developed a **new compiler optimization**, loop fusion & peeling, in the [LLVM Project](#), an **open-source** project
- Created an algorithm that adds hot global variables to the Table of Contents, improving AIX performance by **3%**
- Coauthored a loop optimization pass (loop unrolling) which exploits the Power9 Cache and reduced misses by **20%**

Ciena

Ottawa, Canada

Software Engineering Intern

Sep – Dec 2019

- Spearheaded the development of a progressive web app that enabled users to manage up to **25,000** Waveservers
- Refactored Waveserver CLI process algorithm that eliminated visual delay and reduced processing time by **90%**
- Transformed legacy CLI to [CLIGen](#) for transition to a customized algorithm using enhanced **Python** scripting

Uptake

Mississauga, Canada

Software Developer Intern

Jan – Apr 2019

- Built an automated reminder feature using **Angular** that sends emails to sales reps. regarding sales leads
- Redesigned CRM UI framework as part of Uptake brand refresh providing a standard interface across all products
- Wrote **SQL** scripts to migrate data from on-premises servers to **AWS**, saving **3 days** of manual effort

PROJECTS

Arrows: Indoor Navigation Mobile App

May 2021 – April 2022

- Designed a **React Native** app that determines a user's current location through **image similarity** and provides users with real-time directions to their desired destination via **augmented reality (AR)** [Video Demo 1](#) [Video Demo 2](#)
- Recipient of the University of Waterloo ECE **Medal of Excellence** for the 2022 Capstone Design Symposium

WHEELCHEERIO

May – Aug 2019

- Built a wheelchair monitoring device that measures speed (RPM) and distance traveled during a "trip"
- Designed a custom **PCB** using DipTrace and wrote **C firmware** to interface the **TI MSP430** & hardware components

EXTRACURRICULAR ACTIVITIES

WATONOMOUS: Autonomous Vehicle Design Team

Waterloo, Canada

Power Systems Lead & Radar Developer

Apr 2019 – May 2020

- Participated in the **SAE AutoDrive Challenge** and led the Power Systems team to build a level 4 autonomous vehicle
- Coded a **C++** driver to interface with the **radars** to extract key metrics of the surroundings

SKILLS

- **Languages:** C/C++, Python, JavaScript, SQL, Bash
- **Frameworks and Tools:** TensorFlow, Keras, Pandas, Sklearn, Docker, Flask, AWS (S3), Heroku, Git, UNIX