

SIDDHARTH MADHAVAN

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EDUCATION

National University of Singapore	B.E. in Computer Engineering (Honours) Second Major in Innovation & Design Program GPA: 4.39/5 or 3.60/4	Aug '16 - Jun '20
NUS Overseas Colleges - University of Toronto	Year-long entrepreneurial program where I worked in a high-tech start-up and took courses in entrepreneurship, marketing, and new venture creation.	Aug '18 - Jul '19

WORK EXPERIENCE

Visa Inc., Singapore **Oct '20 – Present**

Senior Software Engineer – Observability (Nov '21 – Present)

- Handling monitoring solutions across various platforms within Visa and responsible to enable end-to-end system monitors, build Grafana dashboards and Prometheus alerts

Associate Technical Product Analyst – Solution Architecture (Oct '20 – Nov '21)

- Handled system integration and technical solutions delivery
- Constructed architecture diagrams, server, and firewall blueprints after analyzing infrastructure needs
- Lead infrastructural discussions among multiple stakeholders to achieve project objective
- Aided in Virtual Machine creation and Physical Server procurement

Bot MD., Singapore

Jun '20 – Sept '20

Software Engineering Intern

- Created a critical ECG alert integration to alert the duty doctor, through AI chatbot when an ECG is sent from an ambulance to hospital's email address
- Created a mental health check-in module to allow users to select emojis depending on their moods

Blockthrough Inc., Toronto, Canada

Aug '18 – Jul '19

Software Engineering Intern

- Created an industry standard Single Request Architecture that reduced the network calls made to the servers and with reduced latency, more auctions took place and increased the overall revenue by about 40%
- Implemented a tag-free way for publishers to onboard, which reduced the on-boarding time by 33%
- Aided in getting Google Ad Exchange up and running for all publishers which increased the overall revenue by more than 20%

PayBoy Pte Ltd., Singapore

Jun '17 – Oct '17

Software Engineering Intern

- Added new scenarios to the core decision making framework in leave systems which enable leave carryover capabilities
- Practiced test driven development to ensure 100% coverage of the software including unit, integration, and functional testing

Singapore Armed Forces., Singapore

May '14 – Mar '16

21st Singapore Artillery – 3rd Sergeant

- Recipient of the Silver Bayonet – awarded to the top 10% of the cohort, based on their leadership qualities, fitness, and other measures
- Recipient of the NS Excellence Award – awarded to the top 10% of performers during In-Camp Training

PROJECTS

Jan '17 – May '20

SparkFab! The Fashion Search – Big Data Project

- Designed and implemented a product classification and fashion feature detection on fashion images
- Built leveraging transfer learning with Spark, Logstash – a server-side data processing pipeline, Elasticsearch – a search engine and Django based Web application for user interaction

MiddleGround – Startup Ideation

- Designed and created a social media platform that facilitated socio-political discourse in a respectful and meaningful manner
- Minimum viable product was built using React JS and GraphQL

Rolls Royce – Unmanned Monitoring and Maintenance System

- Created an autonomous robot leveraging OpenCV to conduct routine test, provide constant visual monitoring and send feedback on switchboards to remote operators
- Coded out the entire logic required for the robot to function seamlessly
- Designed the overall architecture that involved communication between Raspberry Pi, Arduino, and PostgreSQL

MedDel – ST Electronics Tech Factor Challenge(Semi Finalists)

- Designed and created an automated syrup plus pill dispenser solution with alerting capabilities for elders
- Programmed a proof of concept using Arduino and 3D printed components

Directory of Contacts (DoC) – Software Engineering Project

- Designed a command line interface application that has an address list panel and an in-built Browser
- Followed test driven development
- Programmed using Java as part of the Software Engineering module

ShareIt – Database Project

- Designed an online platform for borrowing and loaning items
- It is lent based on a bidding system in which the successful bidder can either be chosen by the item owner or automatically selected by the system
- Tech Stack used: HTML, CSS, JavaScript, and PostgreSQL

NUS Connect – Orbital (Independent Software Development Project)

- Designed a web application that incorporated forums, modules, and chat features together for NUS Students
- Built using MEAN Stack (MongoDB, Express JS, Angular JS, and Node JS)

Audio Effects – Verilog Project

- Programmed the Xilinx FPGA Basys3 in Verilog language
- Added new features such as volume control, pitch changer, delay, instrumental sounds, playback, seven segment display and countdown timer

NUSpace – Cortex M3 Microcontroller Project

- Programmed on LPC1769 that runs on a Cortex-M3 microcontroller
- Programmed Stationary, Launch and Return states to simulate a rocket takeoff and landing procedure
- Written in C and Assembly language

Balloon Satellite – Multidisciplinary Project

- Designed, tested, and prototyped a balloon satellite with sensing, actuation, wireless communication, and live video stream capabilities to perform real-time weather monitoring as part of a multi-disciplinary team
- Programmed two Arduinos to act as a base station and satellite respectively. XBee wireless communication was used to communicate between Arduinos

COMPETITIONS AND ACHIEVEMENTS

- Mentored a team of **five interns** in Visa Inc, to win the APAC regional intern case challenge - **2021**
- Recipient of the Singapore Armed Forces National Service Excellence Award – awarded to the top 10% of performers during In-Camp Training - **2021**
- Got selected for the coveted NUS Overseas Colleges Toronto Program - **2018**
- Innovation and Design Program Business Committee – In Charge of gathering sponsorships, liaising with companies, and organizing events for the term **2017 - 2018**
- ST Electronics' Tech Factor Challenge (Semi Finalist) - **2017**
- Recipient of the Singapore Armed Forces Silver Bayonet which is awarded to the top 10% of the cohort, based on their leadership qualities, fitness, and other measures - **2015**

SKILLS

Languages: Java, C, SQL, Python, JavaScript, Ruby (proficient); C++, Scala, GoLang, Verilog, Assembly (familiar)

Software: Git, GitHub, Apache Spark, Bitbucket, JIRA, Elasticsearch, Prometheus, Bosun