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
- Responsible for enabling 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 through AI chatbot for emergency medical alerts
- Created a mental health check-in module to capture daily user moods using pictograms

Blockthrough Inc., Toronto, Canada **Aug '18 – Jul '19**
Software Engineering Intern
- Created an industry standard Single Request Architecture that reduced network calls and increased the overall revenue by about 40%
- Implemented a tag-free way for publishers to onboard, reducing on-boarding time by 33%
- Aided in getting Google Ad Exchange up and running for all publishers thereby increasing 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 that enabled 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

SparkFab! The Fashion Search – Big Data Project
- Designed and implemented a product classification and feature detection on fashion product 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
- Designed the overall architecture that involved communication between Raspberry Pi, Arduino, and PostgreSQL

MedDel – ST Electronics Tech Factor Challenge (Semi-Finalist)
- 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 with an address list panel, events panel and an in-built browser
- Followed test-driven development and programmed using Java

ShareIt – Database Project
- Designed an online platform for borrowing and loaning items
- Programmed a lending system based on bidding that allowed both automatic and manual selection of borrower
- Built using HTML, CSS, JavaScript and PostgreSQL

NUSConnect – Orbital (Independent Software Development Project)
- Designed a web application that incorporated forums, modules, and chat features 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 ran on a Corex-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
- Xbee wireless communication was used to communicate between the base station and satellite

COMPETITIONS AND ACHIEVEMENTS
- Visa Inc, APAC Regional Intern Case Challenge – Mentor of winning team **(2021)**
- Singapore Armed Forces National Service Excellence Award – Recipient and top 10% of cohort **(2021)**
- NUS Overseas Colleges Programme – Selected as Student Ambassador to University of Toronto **(2018)**
- ST Electronics' Tech Factor Challenge – Semi-Finalist **(2017)**
- Singapore Armed Forces Silver Bayonet – Recipient and top 10% of cohort **(2015)**

SKILLS

Proficient Languages: C, Golang, Java, JavaScript, Python, Ruby, SQL

Familiar Languages: Assembly, C++, Scala, Verilog

Software: Apache Spark, AWS, Bitbucket, Bosun, Elasticsearch, GitHub, Kubernetes, Prometheus