NGUYEN VAN BINH

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EDUCATION

National University of Singapore   **Aug 2020 – Present**
Bachelor of Engineering, Computer Engineering, Minor in Management
- Cumulative Average Point (CAP): 4.79/5.0
- Expected Graduation Date: May 2024
- Relevant coursework: Software Engineering, Data Structures & Algorithms, Database Systems, Digital Design, RTOS, Computer Organization, Calculus, Statistic, Linear Algebra, Discrete Structure, Accounting

SKILLS

Programming Languages	Python, C/C++, Java, Go, Assembly, Solidity
Backend	Django, REST Framework, SQL, PostgreSQL, Heroku
Frontend	HTML/CSS/JavaScript, VueJS
Hardware	FPGA Programming (Verilog), ARM-based MCU, Raspberry Pi, Arduino
AI/Machine Learning	PyTorch, TensorFlow, Keras
Workflow	Git, GitHub, Trello

EXPERIENCE

National University of Singapore, Student Researcher   **Jan 2022 – now**
- Project: "Improving learning algorithms for spiking neural network hardware accelerators"
- Analyze the tradeoffs in learning algorithms for spiking neural networks, design, and implement hardware accelerators for spiking convolutional neural network on FPGA

National University of Singapore, Teaching Assistant   **Aug 2021 – now**
Teaching Assistant for IT5003 Data Structures and Algorithms for AY21/22 Semester 1 & 2
- Conduct classes of ~20 Master students, review related concepts, showcase live coding in Python
- Provide consultations and grade weekly assignments
Teaching Assistant for CG2111A Engineering Principles and Practice for AY21/22 Semester 2
- Provide consultations during lab sessions, grade lab reports
- Related topics: bare-metal programming, communication protocols, Lidar, SLAM, power management

Edison Experimental Physics Laboratory, Research Assistant   **Aug 2019 - Jun 2020**
- Collaborated with Physics teachers and Engineers to design, develop and test experimental Physics models
- Conducted coaching sessions for students participating in Vietnam National Physics Olympiads

PROJECTS

- ActiveNUS (Orbital 2021), a web-based application promoting time management techniques and study methods using Django, VueJS and PostgreSQL (*https://activenus.herokuapp.com/)*
- Alex, a tele-operated vehicle with search and rescue functions utilizing RPi, Arduino Uno, ROS, and Lidar
- Click, an all-in-one desktop app for managing modules, tracking food consumption, time scheduling, and journaling (*https://github.com/AY2122S1-CS2113T-T09-4/tp/releases/tag/v2.2*)
- FPGA Project, a sight-and-sound entertainment system implemented with Verilog and Digilent Basys 3 Board
- DisneyLang (Hack&Roll 2022), a Discord bot with NLP-related functionalities built with Natural Language Toolkit (*https://devpost.com/software/disneylang*)

AWARDS AND SCHOLARSHIP

- Champion, National AWS DeepRacer League, Dec 2019
- Bronze Medal, European Physics Olympiad, June 2019
- Second Prize in Physics, Vietnam National Physics Olympiad, Jan 2019

EXTRA CURRICULAR ACTIVITIES

Phan Debate Club, President   **Aug 2017 - Aug 2018**
- Managed high school debate club with 20+ members, executed recruitment process, and organized debate competitions
- Collaborated with clubs nationwide, executed sharing sessions between organizations, and reached 1000+ followers on social media (Facebook)

National University of Singapore
Unofficial Transcript

NAME:	NGUYEN VAN BINH	**STUDENT NO.:**	A0219795L	**DATE OF BIRTH:**	15/01/2001	**DATE ISSUED:**	06/01/2022

PROGRAMME: BACHELOR OF ENGINEERING (COMPUTER ENGINEERING)
PROGRAMME STATUS: ACTIVE IN PROGRAMME

MODULE		GRADE	CREDITS

ACADEMIC YEAR 2020/2021 SEMESTER 1

CG1111	ENGINEERING PRINCIPLES AND PRACTICE I	A-	6.00
CS1010	PROGRAMMING METHODOLOGY	S	4.00
CS1231	DISCRETE STRUCTURES	A-	4.00
GER1000	QUANTITATIVE REASONING	S	4.00
MA1511	ENGINEERING CALCULUS	A+	2.00
MA1512	DIFFERENTIAL EQUATIONS FOR ENGINEERING	A+	2.00

BACHELOR OF ENGINEERING (COMPUTER ENGINEERING)
CUMULATIVE AVERAGE POINT: 4.64

ACADEMIC YEAR 2020/2021 SEMESTER 2

CG1112	ENGINEERING PRINCIPLES AND PRACTICE II	A-	6.00
CS2040C	DATA STRUCTURES AND ALGORITHMS	A+	4.00
EE2026	DIGITAL DESIGN	A+	4.00
ES1103	ENGLISH FOR ACADEMIC PURPOSES	S	4.00
GEH1018	A BRIEF HISTORY OF SCIENCE	S	4.00
MA1508E	LINEAR ALGEBRA FOR ENGINEERING	A+	4.00

BACHELOR OF ENGINEERING (COMPUTER ENGINEERING)
CUMULATIVE AVERAGE POINT: 4.75

ACADEMIC YEAR 2021/2022 SEMESTER 1

ACC1701X	ACCOUNTING FOR DECISION MAKERS	A+	4.00
CFG1002	CAREER CATALYST	CS	2.00
CG2027	TRANSISTOR-LEVEL DIGITAL CIRCUITS	A+	2.00
CG2028	COMPUTER ORGANIZATION	A+	2.00
CP2106	INDEPENDENT SOFTWARE DEVELOPMENT PROJECT (ORBITAL)	CS	4.00

MODULE		GRADE	CREDITS
CS2101	EFFECTIVE COMMUNICATION FOR COMPUTING PROFESSIONALS	S	4.00
CS2113T	SOFTWARE ENGINEERING & OBJECT-ORIENTED PROGRAMMING	A-	4.00
GEQ1000	ASKING QUESTIONS	CS	4.00
ST2334	PROBABILITY AND STATISTICS	A+	4.00

BACHELOR OF ENGINEERING (COMPUTER ENGINEERING)
CUMULATIVE AVERAGE POINT: 4.79
DEAN'S LIST

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