HENG Hian Wee

Enthusiastic and highly motivated postgraduate student looking to make a meaningful impact in tech. Has experience in teaching at pre-university level, amateur web development, malware analysis, and penetration testing. Willing to learn and pick up new skills to thrive in new working environments. Looking to start a career as a developer, researcher, or in cybersecurity.

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Education

Nanyang Technological University

MSc. in Cybersecurity Jan 2023 — Present · CGPA 3.83/5.00
- Capstone Project: A More Efficient & Accurate Crash Root Cause Analysis Tool based on Large Language Model (LLM)
- Expected graduation: May 2024
- Electives: Network Security, Software Security, Security Monitoring & Threat Detection, Forensics

University of West England, Bristol

BSc. Computer Science (Hons) Aug 2015 — Aug 2018 · CGPA 3.80/4.00
- Dual-award program with Taylor's University
- Final Year Project: International Procurement Online Matching System (IPOMS)
- Graduated with First Class Honors
- Activities: Peer-Assisted Learning Services (PALS), First Year Experience (FYE) committee, Christian Fellowship

Taylor's University

Foundation in Computing Aug 2014 — Aug 2015 · CGPA 3.63/4.00
- Completed with Distinction
- Activities: Peer-Assisted Learning Services (PALS), Christian Fellowship

Experience

Lecturer · **Taylor's College** Aug 2020 — Dec 2022

- Lectured subjects (and acted as subject leader) offered in
  - Foundation in Computing (avg. 80-100 students per subject): Introduction to Computing, Web Programming
  - Diploma in Information Technology (avg. 10-20 students per subject): Object-Oriented Programming, Object-Oriented Analysis and Design
- Assisting tutor for: Practical IT Skills, Introduction to Algorithm
- Additional duties: grading assignments and final exams for led and tutored subjects, preparing class material
- Developed new syllabi under Taylor's Curriculum Framework 2.0 (TCF 2.0) for all lectured subjects as subject leader; syllabi utilized since Aug 2022
- Reported to: Mr. Lee Weng Ken, Mr. Lim Eng Lye (Sean)

Research Support Personnel · **Taylor's University** Jun 2019 — Feb 2020

- Developed Capstone Project Repository (CPR) for the ongoing knowledge management research project
- Project Title: Prescriptive Knowledge Elicitation Model for Knowledge Management
- Mentor: Dr. Sanath Sukumaran

Freelance Tutor Oct 2018 — May 2022

- Private tutor for Mathematics and Additional Mathematics (CAIE IGCSE/SPM Level)

Intern · **SME International Trade Association of Malaysia** Jan 2018 — Mar 2018

- Involved in special project for online procurement of SME services (i.e., IPOMS)
- Managed company's online media gallery and website, showcasing company's profile and recent initiatives up until 2017

PALS Leader (Peer Tutor) · **Taylor's University** Jan 2015 – Jun 2018

- Peer tutored predominantly math-centric computing subjects at Foundation, Diploma and Undergraduate level.
- Mentors: Ms. Jane Magdalen Jesudas, Mr. Gobindran Raj Rajagopal, Ms. Jamilah bt. Jamaluddin
- Reported to subject leaders:
  ▸ Mr. Tan Yeong Yih (Ireneaus): Algebra & Calculus, Discrete Mathematics
  ▸ Dr. Tee Lee Hong: Mathematics
  ▸ Ms. Shageetha Ramachandran: Computing Mathematics
  ▸ Dr. Thulasyammal Ramiah Pillai: Mathematics for Computing 1
  ▸ Mr. Lim Eng Lye (Sean): C Programming
  ▸ Ms. Sarojini Devi Nagappan: Object-Oriented Programming

Selected Projects

A More Efficient & Accurate Crash Root Cause Analysis Tool based on Large Language Model (LLM)

- A CLI analysis tool built with Node.js, TypeScript, and OpenAI's GPT-4 API; tasked to analyze underlying causes of software crashes with comprehensive insights into root issues.
- Academic Supervisors: Dr. Ge Jingquan, Prof. Liu Yang

Capstone Project Repository (CPR)

- A web repository containing past capstone project entries by ex-students for Taylor's computing undergraduate programs.
- Continued working on the project as a hand-me down from a previous student developer; project pitched to the Head of Faculty of Innovation and Technology (FIT).
- Mentor: Dr. Sanath Sukumaran

International Procurement Online Matching System (IPOMS)

- A web portal for SMEs to advertise their businesses to a global audience; worked on the prototype for the company as part of a group-effort final year project.
- Developed back-end logic for retrieving user data from the website to be stored into a MySQL database, as well as information retrieval from database to be displayed on the web portal.
- Collaborated with: Chan Chiew King, Li Jie
- Supervisors: Ms. Norhidayah Hamzah (Academic), Ms. Leanne Loh (Industrial)

Lucy B.'s Art Portfolio https://lucywastaken.vercel.app

- An art student's web portfolio showcasing previous works and art commissions using Next.js, TypeScript, and Node.js for dynamic retrieval of images from internal directories.

Publications

S. Srivastava, Y. Wan, **H.W. Heng**, "Description, Implementation and Performance/Security Analysis of ASCON128 V1.2", *International Journal For Multidisciplinary Research*, vol. 5, no. 6., pp. 1-35, 2023, doi: `10.36948/ijfmr.2023.v05i06.10225`

Certifications/Courses

Mastering JavaScript Unit Testing · Code with Mosh Issued Feb 2024
Credential ID: `cert_85pnjvl7`

Mastering Next.js 13 with TypeScript · Code with Mosh Issued Jan 2024
Credential ID: `cert_k5y4sqq3`

React 18: Intermediate Topics · Code with Mosh Issued Jan 2024
Credential ID: `cert_kwsc2gp0`

React 18 for Beginners · Code with Mosh Issued Dec 2023
Credential ID: `cert_dc3c0y89`

The Ultimate TypeScript Course · Code with Mosh Issued Dec 2023
Credential ID: `cert_qmlplq9t`

Programming Foundations: Object-Oriented Design · LinkedIn Learning Issued May 2023

Google Web Academy Certificate of Achievement (Online Professionals) · Google Issued Jul 2016

Skills

Security & Diagnostic Tools

Burp Suite, Wireshark, Snort, YARA, REMnux, SIFT Workstation

Tools & Platforms

VMWare Fusion, Parallels Desktop, VirtualBox, Docker, Git, GitHub, Vercel, FileZilla, WinSCP, Cyberduck

Programming Languages

JavaScript (ES2015+), TypeScript, HTML, CSS, PHP, C#, MySQL, SQLite, C/C++, Java, Python

Libraries & Frameworks

React, Next.js, Node.js, Bootstrap 5, SASS, Chakra UI, Tailwind CSS, Radix UI, DaisyUI, Vitest

Multimedia

Final Cut Pro X, Adobe InDesign, Adobe Photoshop, OBS Studio, Audacity

Miscellaneous

Android Studio, Material for MkDocs, VuePress, Jekyll, WordPress, Ghost

Languages

English, Chinese, Malay

Research Interests

Software Testing, Software Security, Curriculum Development

References

Mr. Tee Wee Jing, Senior Lecturer

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Ms. Sumathi Balakrishnan, Lecturer

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Dr. Raja Kumar Murugesan, Assoc. Prof

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Mr. Lim Eng Lye (Sean), Senior Lecturer

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Dr. Sanath Sukumaran, Trainer/Consultant

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