Tommy ANG | Mobile No.: 9371 6271 | Email: Tang030@e.ntu.edu.sg

EDUCATION

Nanyang Technological University, Singapore   Aug 2021 – May 2025
Bachelor of Engineering (Computer Engineering) with Minor in Film
- Year 4 Student in School of Computer Science and Computer Engineering
- Specialization: Artificial Intelligence (AI) & Internet of Things (IoT)

Ngee Ann Polytechnic, Singapore
Diploma in Electronic and Computer Engineering   Apr 2012 – Feb 2015
- Dean's List for all Semesters, Academic Year 2012/2013
- Xilinx Asia Pacific Prize Award for Electronic Design
- Joint Polytechnic SAF Diploma Scheme Scholarship
- Best Performance in the module Electronic Design Prototyping 2
- Best Performance in the module Marketing Fundamental
- Selected and trained in Ngee Ann Polytechnic Talent acceleration program World Skill Singapore (Electronics)

ACADEMIC PROJECT

Nanyang Technological University, Singapore   Aug 2021 – May 2025
Final Year Project – CodeLimb: AI-Powered Bionic Arm
- Developed a real-time motion-controlled bionic arm integrating machine learning & IoT.
- Implemented EMG signal processing to enable natural hand movements for amputees.
- Designed and tested an embedded system (STM32) for low-latency movement execution.
- Optimized deep learning models for gesture recognition and adaptive control.

VisionMed: AI-Powered Pharmaceutical Quality Control
- Developed a computer vision-based defect detection system for pharmaceutical tablets.
- Built deep learning models (CNNs, TensorFlow, PyTorch) to classify drug quality.
- Integrated Edge AI solutions for real-time processing in industrial automation.

Ngee Ann Polytechnic, Singapore   Apr 2011 – Nov 2011
Final Year Project – Design and Development a system for an online marketplace for freelance services
- Developed a mobile application platform to connect more than 100 freelancers to people or businesses.
- Utilized Android studio to incorporate digital data storage to launch application online (Beta).
- Created Mobile Application to store profiles via standard sign-up or Facebook Sign up and interact 100 users.
- Identified and analyzed over 800 lines of code to produce a dynamic and responsive web interface.

WORK EXPERIENCE

Craft Health Pte. Ltd   Jan 2024 – Jul 2024
Computer Vision Software Engineer, Professional Intern
- Spearheaded the design and development of application-specific automation solutions using Computer Vision Software, resulting in a 50% reduction in manpower effort and a 100% increase in productivity.
  - Designed and implemented an enhanced computer model for precise 3D printing of pharmaceutical supplements, integrating computer vision software to automate quality checks and provide real-time feedback to operators.
  - Implemented computer vision algorithms to identify and classify various pharmaceutical drugs, enabling continuous learning and differentiation of drug quality.
  - Troubleshooted, debugged, and provided support for existing firmware in current 3D printers.
- Contributed to general operations, including company production, general administration, and clean room procedures.
  - Participated in the production process of 3D-printed pharmaceutical supplements, involving drying, stacking, and packaging thousands of products for clients.
  - Manage process development, optimization, and standardization existing or new company standard operating procedure.
  - Maintained rigorous documentation of experimental data and procedures for the computer vision program, ensuring readability and continuity for future engineers.

ST Engineering Mission Software & Services Pte. Ltd   May 2023 – Aug 2023
Hospital Command Center, Intern
- Developed an automation testing system using Playwright to streamline and expedite software testing procedures for ST engineering Tan Tock Seng Hospital Team. This initiative led to significant time savings and enhanced accuracy in handling millions of user's records.
- Utilized Jupyter Notebook and Python to design an analysis script that effectively assessed the performance of the testing team's SQL queries. By identifying and isolating queries that did not meet Tan Tock Seng Hospital's stringent requirements, I contributed to optimizing database operations and improving system efficiency.
- Collaborated with my supervisor on projects involving Integrated Health Information Systems for Tan Tock Seng Hospital, gaining valuable insights into the integration of healthcare software solutions, and contributing to critical healthcare technology advancements.
    o Acquired an in-depth understanding of hospital workflows from a software systems perspective, allowing me to provide detailed explanations on potential enhancements to current processors. My knowledge proved instrumental in the development and maintenance of existing processors.
    o Demonstrated versatility by assisting in administrative tasks and creating Excel formulas for my supervisor's workbook, effectively streamlining his workload and contributing to increased efficiency.

Play-Facto Pte Ltd   Jul 2022 – Aug 2022
Robotics Trainer, Intern
- Taught coding and computational thinking to Secondary School students of class size 30 for eight schools.
- Taught 4 different types of codes such as Scratch Coding, Micro-bit Coding, and M5Go.
- Guided students age of 8 to 18 years old to learn several programming tools and debugging techniques.
- Applied various teaching methods after applying pedagogical analysis to current teaching standards.

Singapore Armed Forces   Feb 2015 – Aug 2021
Army Intelligence Specialist
- Coordinated yearly Army Tactical Evaluation missions to evaluate battalion size of 300 NS Servicemen capabilities and effectiveness in terms of logistics, equipment, transports, and admin task such as clearance.
- Trained more than 5 Active Battalions and 10 NS Operationally Ready troops, tallying over 3000 soldiers.
- Oversaw Active Armour reconnaissance units to train and lead a platoon size of 40 on various soldier crafts such as air/sea load operations and tactical drills with tactical equipment to achieve mission readiness.
- Deployed overseas for intelligence terrain analysis of 20 different country maps to achieve mission objectives.

CO-CURRICULAR ACTIVITIES

IEEE NTU student Club   Aug 2022 – Aug 2023
Marketing (Design) Officer
- Design infographics for events and inform more than 100 members of club activities and up to date information.
- Supervised club social media to increase market reach to attract non-members and build member loyalty.
- Analysed how human react to social media posts and attracted 200 people to large-scale club events.

Engineers Without Borders   Aug 2022 – Jul 2023
Project Director for Movement of Inclusivity
- Liaised and developed a web interface for the public to bring awareness of a social cause.
- Directed tasks to team members and spearheaded 3 different projects.
- Diagnosed Coding bugs for over 200 lines of code to create a dynamic homepage.

Regular Service Project (RSP) – Youth Outreach Tutor *(Aug 2022 – Jul 2023)*
Mentor & Tutor
- Conducted weekly tutoring sessions, providing academic mentorship to underprivileged youth.
- Designed interactive STEM learning activities to enhance critical thinking & problem-solving.
- Inspired students to explore engineering and technology careers through hands-on projects.

SKILLS

Languages: Proficient in English and Chinese
Digital Skills: Python, C, Java, Verilog, Basic Assembly and Microsoft Office Excel
Creative Skills: Adobe Premium Pro, After Effects and Adobe Photoshop

HOBBIES & INTERESTS

Playing musical instruments (Guitar, Cajon, and violin) and Marathon Running