

EDUCATION

Nanyang Technological University (NTU)

Aug 2021 – **Jun 2024** (Expected)

- **Bachelor of Engineering (Electrical and Electronic Engineering)**
- **Honours (Merit)** (Expected)
- Specialisation: **Info-Communications Engineering (Computer Engineering)**
- Relevant Modules: (1) *Data Structures and Algorithms* (2) *Introduction to Data Science and Artificial Intelligence* (4) *Communication Principles* (5) *Computer Communication* (6) *Web Application Design* (7) *Information Security*

VIRTUAL TRAINING AND LEARNING & DEVELOPMENT / IT CERTIFICATION

- Udemy Relevant Modules: (1) *The Complete NIST Framework Course for Cyber Risk Management* (2) *Risk Management for Cybersecurity and IT Managers* (3) *Introduction to Service Management with ITIL 4* (4) *IT Security Gumbo: Cloud Security Fundamentals* (5) *IT Governance: A Guide for IT Professionals* (6) *ISO / IEC27001 - Information Security Management System*
- Relevant Module (TikTok): *Foundation Programme in Server, Quality Assurance and Site Reliability Engineering*
- **SQL** (Basic) Certificate (HackerRank)
- Problem Solving (Basic) Certificate (HackerRank): **C++, Python**

INTERNSHIP EXPERIENCE

GIC Pte Ltd, (1) IT Risk Assessment Intern (2) Differentiated Controls Framework Intern Jan 2023 – Aug 2023

- Collaborated and supported Information & Technology Risk Officers on initiatives and assignments.
- Performed risk assessments on IT Systems and user software to evaluate security controls design and operating effectiveness.
- Assessed and researched emerging technology risks and proposed effective mitigating controls with stakeholders.
- Developed familiarity with IT controls best practices in industry standards (e.g., NIST, MAS Technology Management Guidelines) and proposed improvement to IT risk management processes.
- Enhanced and maintained risk awareness and culture by conducting training sessions, workshops, and communications through corporate channels.
- **GIC Project:** Applied **MS Excel VBA** to improve Vendor Due Diligence Questionnaire to intuitively show essential compliance based on vendors' responses and alert vendors to close gaps in IT & Data Centre Security upon non-compliance identification.

Influential Brands LLP, Software Developer-Intern

May 2022 – Sep 2022

- Spearhead development of new iOS and Android application.
- Led development of cross-platform networking application for organisation's project.

Influential Brands Internship Project: IB Chat Application & Development

- Utilised **Dart Programming** (Flutter) to implement messaging, video and voice calling features.
- Designed and developed business's newsfeed UI/UX for regular updates with consistent application design that incorporated corporate brand identity.
- Configured profile pages for members and personals, showcasing community groups and members to enhance user engagement.
- Contributed to full software application development cycle (i.e., designing, implementation, testing, delivery) with timely delivery of application to fulfil organisation's requirements.

Rolls Royce Singapore Pte Ltd, Engineering Intern (Electrical)

Mar 2018 – Aug 2018

- Determined appropriate platform with section flexibility for Variable Stator Valve Actuator (VSV) Action Controller.
- Evaluated tools available for selected system-on-chip (SoC) and designed IP for SoC using **VHDL/Verilog**.
- Developed Visual Basic Application (GUI) using **Visual Basic Programming** that linked ARM Processor to control duty cycle of Pulse-Width Modulation (PWM) by means of communication from PC through Ethernet via TCP/IP.

ACADEMIC PROJECTS / MODULE PROJECTS / COMPETITION PROJECT

NTU-EEE FYP: Cross-Platform Mobile Applications for Electromagnetic Analysis

Aug 2023 – **May 2024**

- Expected to apply **Dart Programming** (Flutter) to design, code and develop cross-platform application to provide user-friendly interface for showcasing step-by-step solutions; aim to determine electric and magnetic field intensity.
- Enable application to guide users through process, enhancing their understanding to calculate and visualise electric and magnetic field intensity effectively.

NTU-EEE Module: Web Application Design

Sep 2023 – Oct 2023

Module Project: Full-Stack E-Commerce Platform to Optimise Shoe Shopping Experience (Team of 2)

- Utilised 5 software programming (i.e., **HTML5, CSS, JavaScript, PHP, SQL**) to design, code and develop efficient client-side operations, customised UI design without framework and server-side operations.
- Handled and validated server-side data with data integrity and security intact.
- Implemented client-side validation for real-time user feedback thereby honing overall usability.

- Implemented prepared statements to enhance application security, guarding against potential SQL injection attacks.

NTU-EEE Design and Innovation Project: **Implementation of Blockchain Testbed for Cyber Security (Team Leader of 7)**

Aug 2022 – Oct 2022

- Utilised 3 software programming (i.e., **HTML, CSS, JavaScript**) with library “React” to design, code and develop educational website for introducing *Blockchain Technology & Blockchain Voting System* to large audience.
- Employed NEAR Protocol to build and secure Blockchain Voting System Application (BlockVote) for enhancing transparency and accountability in voting processes.
- **Educational Website:** <https://deandrehaijuel.github.io/blockchain-voting-system/>
- **BlockVote:** <https://github.com/deandrehaijuel/blockvote>

Shopee Product and Design Challenge Project: **Digital Payment** (Team of 2 Members)

Sep 2022

- Utilised **Dart programming** (Flutter) to design, code and develop web application for tackling digital payment.

SKILLS

- **Languages:** Proficient in English and Chinese (Mandarin)
- **Software Programming:** CSS, C#, C++, Dart, HTML, JavaScript, jQuery, Kotlin, MATLAB, MySQL, PHP, Python, SCSS, SwiftUI, Visual Basic, Visual Basic for Applications, XML, C Language
- **Software Applications:** Adobe Photoshop, Android Studio, AutoCAD, LT-Spice, NI Multisim, Unity, Visual Studio Code, Xcode, Microsoft 365, ZOOM, MS Team
- **IT Tools / Libraries / Frameworks:** Firebase, Flutter, Google Cloud Platform, npm, NumPy, Pandas, React, Stream, yarn
- **AI & Machine Learning:** Decision Tree Classifier, Lemmatise, Linear Regression, Logistic Regression, Probability
- **Operating System Environment:** Linux, macOS, Microsoft Windows
- **LinkedIn:** <https://www.linkedin.com/in/deandrehaijuelim>
- **Portfolio Website:** <https://deandrehaijuel.github.io/portfolio-website>

PERSONAL PROJECTS ACCOMPLISHMENT

Personal Project 1: **Communication Application – X to Y**

Sep 2023 – Sep 2023

- Utilised 3 software Programming (**SwiftUI** [iOS], **Kotlin, XML** [Android]) to design, code, and develop communication application.
- Employed **Firebase** as backend with seamless user authentication, efficient data management, and real-time chat functionality intact.
- Conceptualised and executed intuitive UI/UX design for “X to Y”, adeptly selecting colour themes and incorporating elements inspired by captivating Lottie animation.
- Crafted visually appealing and user-friendly interface for “X to Y”, integrating swipe-based interactions to enhance navigation and encourage user engagement.
- Implemented real-time messaging functionalities within “X to Y”, showcasing adept coding skills and utilising API integrations to fetch and display messages.
- Infused application with distinctive personality, resonating with users and enhancing their overall experience.
- Github (iOS): https://github.com/deandrehaijuel/xtoy_ios
- Github (Android): https://github.com/deandrehaijuel/xtoy_android

Personal Project 2: **News Application – What’s News?**

May 2023 – May 2023

- Utilised **Dart Programming** (Flutter) to design, code, and develop news application.
- Orchestrated entire project lifecycle as solo developer (from ideation to deployment), showcasing effective project management skills to fulfil deadlines with seamless user experience intact.
- Designed user-friendly and engaging interface for users’ preferences, incorporating swiping card elements for interactive navigation and joyful user engagement.
- Employed coding skill to retrieve and display real-time news articles, demonstrating proficiency in data retrieval and management through API integration.
- Infused application with fun and quirky personality, resonating with users and enhancing their overall enjoyment while staying informed.
- Github: <https://github.com/deandrehaijuel/whatsnews>

Personal Project 3: **Productivity Application – Weekly** (Team of 2 Members)

Mar 2023 – Apr 2023

- Utilised **Dart Programming** (Flutter) to design, code and develop goal tracking application.
- Collaborated with UI/UX Designer to understand target market through market research to create seamless experience.
- Integrated application with backend database for archiving and retrieving user data upon authenticated accessibility without compromising security enforcement.
- Implemented features for tracking user progress and established notifications with motivational quotes, enhancing user experience with motivation for users to achieve their goals.
- Tested and debugged to achieve high quality and error-free application performance.
- Google Play: <https://play.google.com/store/apps/details?id=com.deandrehaijuel.weekly>

Personal Project 4: **Productivity Application – GoalGamer**

Feb 2023 – Mar 2023

- Utilised **Dart Programming** (Flutter) to design, code, and develop productivity dashboard application.
- Incorporated APIs (e.g., ChatGPT API: AI-Powered Communication, Weather API: Weather Information, Finnhub API: Stock Charts, Alpha Vantage API: Stock Pricing) to provide users with real-time data and interactive features.
- Spearheaded end-to-end development of GoalGamer, open-source productivity application, integrating features (e.g., To-Do Lists, Analytics, Weather Updates, Stock Market Information, Currency Conversion).
- Designed intuitive user interface, focusing on user engagement and motivation with features (e.g., Inspiring Quotes, Task Management Functionalities, Data Visualisation) to track progress.
- Customised GoalGamer to accommodate diverse user preferences, fostering flexible and adaptable approach to technology development.
- Github: <https://github.com/deandrehaijiel/goalgamer>

Personal Project 5: ***Lifestyle Application – Choices: Random***

May 2022 – May 2022

- Utilised **C# Programming** (Unity) to design, code and develop lifestyle application.
- Transformed concept into functional application to assist users in making decisions, effectively addressing common challenges of decision-making.
- Designed and customised application elements using Pixelart, enhancing application's visual appeal; leveraged Unity **C# Scripting** to bring functionality to life.
- Prioritised user experience by creating intuitive and straightforward process for decision-making.
- Implemented theoretically calculated and unbiased system within "choices : random." Utilised random sampling to ensure impartial selection of outcomes, providing users with fair and unbiased decision-making tool.
- Google Play: <https://play.google.com/store/apps/details?id=com.deandrehaijiel.randomizer>

Personal Project 6: ***2D Game – CryptoCars***

Jan 2022 – Feb 2022

- Utilised **C# Programming** (Unity) to design, code and develop 2D game.
- Conceived the idea for CryptoCars as a creative response to the inspiration drawn from NFT collections.
- Designed and customised application elements using Pixelart, enhancing application's visual appeal; leveraged Unity **C# Scripting** to bring functionality to life.
- Collaborated with international creators to fine-tune integration of game.
- Designed and produced three distinct versions of the game: WebGL for desktop users, Android for Android device users, and iOS for Apple device users, catering to a broad audience.
- Itch.io: <https://deandrehaijiel.itch.io/cryptocars>
- Google Play: <https://play.google.com/store/apps/details?id=com.deandrehaijiel.CryptoCars>

Personal Project 7: ***NFT – CryptoShowroom#1, CryptoGarage#1, Project CryptoCars***

Dec 2021 – Mar 2022

- Utilised **Python Programming** to generate 19,011 NFTs and upload collections onto OpenSea.
- Initiated development of 3 independent NFT collections: (i) CryptoShowroom#1 (ii) CryptoGarage#1 (iii) Project CryptoCars.
- Designed and developed CryptoShowroom#1 and CryptoGarage#1, showcasing artistic skills in NFT creation.
- Seamlessly integrated indie game CryptoCars into Project CryptoCars, aligning with collection's theme and augmenting user engagement. Timed launch strategically, capitalising on initial user interest and momentum to introduce fresh collection.
- Developed unique brand identity for CryptoShowroom#1, CryptoGarage#1, and Project CryptoCars, highlighting personal connection to collections and translating personal interests into cohesive and visually appealing concepts.
- OpenSea: <https://opensea.io/collection/crypto-showroom-1>; <https://opensea.io/collection/crypto-garage-1>; <https://opensea.io/collection/project-cryptocars>