

# DE JONG YEONG (DJ)

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## SKILLS & TECHNOLOGIES

**Intermediate:** Python • Version Control • HTML5 • CSS3 • Oracle SQL / MySQL • ReactJS

**Exposure:** NextJS TypeScript • JavaScript • Material UI • Bootstrap 4 • PHP Laravel • Circle CI • Heroku • C# • ROS • C++ • SCSS • MongoDB • Java

**Software Tools & Platform:** Trello • Slack • PyCharm IDE • IntelliJ IDEA • Figma • VS Code • Visual Studio

**Personal Skills:** Time Management • Teamwork • Communication • Self-Motivation • Well Structured • Problem Solving • Attention to Detail • Logical • Analytical • Open-mindedness • Creative • Curious

**Languages:** Chinese • English • Cantonese • Malaysian Malay

## PROFESSIONAL EXPERIENCE

**Postgraduate Researcher • Full Stack Engineer | IMaR Technology Gateway** **2022 - Present**

- Research relevant technologies and collaborate with in-house engineers to develop a monitoring application for next-generation smart connected agricultural machines.
- Oversee the software workflow and maintain time-series databases for data communication.
- Prototype applications with **NextJS, LeafletJS, Shadcn/ui, AntD Charts, InfluxDB** and **Supabase**, facilitating dynamic user experience and data visualization.
- Craft insightful reports and deliver weekly updates to stakeholders, foster transparent communication and facilitate timely project deliveries.
- Contribute ideas and develop applications in events such as Open Day and Kerry Science Festival, achieving a 30% increase in user participation.

**Full Stack Developer (Part-Time) | IMaR Technology Gateway** **2020 - 2021**

- Researched relevant technologies to develop web and mobile applications for stakeholders.
- Developed RESTful API services with **PHP Laravel 8.0** framework and **MySQL** database.
- Prototyped web and mobile applications with **ReactJS, React Native, LeafletJS**, and **Bootstrap 4**.
- Adhered to best practices for version control, utilising **Git/GitHub**.

**Graduate Student Intern | IMaR Technology Gateway** **2019**

- Programmed a GUI and automated crane metrics analysis per hour using **Python**, offering ease-of-use for industrial partner - Liebherr Container Cranes Ltd.
- Documented technical workflows and knowledge in private wiki for education of newly hired employees.
- Authored code fixes and enhancements for inclusion in future code release and patches.
- Led version control efforts within our team, employing **Git/GitHub**.

## EDUCATION

**Master by Research in Engineering | Munster Technological University, Kerry** **2022**

**Thesis title:** *Development of Multi-Sensor Fusion Perception Systems for Obstacle Detection in Container Terminals.*

- Liaised with colleagues within the organization to design and construct necessary components to ensure successful project deliveries.
- Obtained satisfactory feedback from supervisors and industrial partners following the preparation and presentation of monthly progress reports.
- Conducted research review on sensor and sensor fusion technology in autonomous vehicles that could be applied to next-generation cranes, leading to a publication in the MDPI Sensors Journal (IF: 3.576) with over 14,000 full-text views and 20 citations to date.
- **Tech: Python, (exposure): ROS, C++**

**B.Sc. (Hons) in Computing with Software Development, 1:1 | Institute of Technology, Tralee** **2015 - 2019**

**Thesis title:** *Sentiment Analysis Approach for Brand Reputation Evaluation.*

**Relevant Projects:**

- Employed **ARIMA** model to predict and forecast on global climate datasets from Kaggle using **Python**.

- Demonstrated a fully automated [CI/CD](#) pipelines with **GitHub**, **Travis CI**, **Heroku**, and **GCP**.

## PERSONAL PROJECTS

**Online Portfolio V2** | <http://www.dejongyeong.com/>

**2022**

- **Tech:** NextJS, EmailJS, CircleCI, Tailwind CSS, Vercel.
- Showcases projects and professional experiences – a digital version of curriculum vitae

**Covid 19 Tracker Application** | <https://covid-19-tracker-apps.herokuapp.com/>

**2021**

- **Tech:** ReactJS, ChartJS, React Simple Maps, CircleCI, Heroku, ESLint, Material UI, Styled Components.
- Visualizes the global and country-specific total confirmed, recovered, and deceased cases retrieved from Open Disease Data API.

## PUBLICATIONS & PRESENTATIONS

**Yeong, D. J., Panduru, K., & Walsh, J. (2024).** Smart Agriculture: Software Platform for Telematics Monitoring in Farm Machinery. **In Press.** Presented in-person at the 35<sup>th</sup> Irish Signals and Systems Conference. Belfast: IEEE.

Edgar, M., **Yeong, D. J.**, Panduru, K., Riordan, D., & Walsh, J. (2024). 3D LiDAR Data Augmentation for Off-Highway Vehicle Applications. **In Press.** 35<sup>th</sup> Irish Signals and Systems Conference. Belfast: IEEE.

Karakuni, S., Barry, J., **Yeong, D. J.**, & Walsh, J. (2021). Data Pre-Processing Methods to Enable Operational Metrics Calculations for Heavy Machinery.

**Yeong, D. J.**, Barry, J., & Walsh, J. (2021). Sensor and Sensor Fusion Technology in Autonomous Vehicles: A Review. MDPI Sensors Journal. **DOI:** 10.3390/s21062140. **Best Paper Award 2023**

Velasco-Hernandez, G., **Yeong, D. J.**, Barry, J., & Walsh, J. (2020). Autonomous Driving Architectures, Perception, and Data Fusion: A review. Cluj-Napoca: IEEE. **DOI:** 10.1109/ICCP51029.2020.9266268

**Yeong, D. J.**, Barry, J., & Walsh, J. (2020). A Review of Multi-Sensor Fusion System for Large Heavy Vehicles Off Road in Industrial Environments. Presented online at the 31<sup>st</sup> Irish Signals and Systems Conference. Letterkenny: IEEE. **DOI:** 10.1109/ISSC49989.2020.9180186.

## VOLUNTEERING EXPERIENCES

**Workshop Instructor** | Kerry Science Festival @ Munster Technological University

**8<sup>th</sup> & 9<sup>th</sup> Nov 2021**

- Delivered “Let’s code with Scratch” online workshop with William O’ Connor (colleague) to 34 primary students via Microsoft Teams.

**Facilitator** | Institute of Technology, Tralee

**9<sup>th</sup> Dec 2019**

- Facilitated a group of 7-10 students in a discussion about climate change and technologies in Causeway Comprehensive School, as part of the Access21@ITTralee.

**Student Volunteer** | MegaDojo @ Institute of Technology, Tralee

**13<sup>th</sup> Oct 2018**

- Mentored a group of 9 students from age 7-17 in intermediate web design using **HTML**, **CSS**, and **JavaScript**, led by an experienced leader.

## ONLINE COURSES, CERTIFICATIONS & ACHIEVEMENTS

- AWS Cloud Practitioner Certification Course @ YouTube by FreeCodeCamp.org (*on-going*).
- Research Integrity: Concise (core course) Certificate, Epigeum, 11 April 2024.
- Microsoft Office Specialist 2010, Microsoft & Certiport, 2013.
- Computer Skills Certificate, UNSW Global & RE2 International Computer School, 2011.

## INTERESTS, HOBBIES & ACTIVITIES

- Interested in web or mobile applications development and artificial intelligence.
- Playing chess – great way to unwind, destress, and keep the mind sharp.
- Gaming – great way to boost teamwork and destress.
- Served as a president of Bowling Club in 2013/14 in SMJK Sam Tet, Malaysia.