

Michelle Angela Widjaja

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Technical Portfolio: michelleangela8.github.io

PERSONAL PROFILE

An enthusiastic Engineering Product Development undergraduate passionate about mechanical design and product development. Skilled in 3D modelling, prototyping, and user-centred design to create innovative and functional products across various industries.

EDUCATION

Singapore University of Technology and Design

September 2021 - Present

- Bachelor of Engineering (Engineering Product Development)
- GPA 4.14/5.0
- Date of graduation: May 2025
- Relevant Courses: Machine Element Design, Engineering Design Innovation, Healthcare Product Design, Systems & Control

Pohang University of Science and Technology

Pohang, South Korea

September 2023 - December 2023

- Global Exchange Programme (GEXP)
- Developed an IntelliJ IDE plugin using Java to visualize number of passed unit tests in a project utilizing pair programming and agile programming practices in 8 weeks
- Relevant Courses: Human-Robot Interface, Materials Processing, Biomedical Materials, Software Design Methods

WORK EXPERIENCE

Sport Singapore

February 2024 - August 2024

Sport Technologist Intern

- Designed 7 multidisciplinary 3D prototypes using Solidworks and 3D printing including laser gun mounts, sweat capsules, finger splints, enhancing design functionality and optimising usability in athletic and physiological applications
- Contributed to setting up 3D printing capabilities at the organisation by leading various 3D prototyping projects and authoring a comprehensive Standard Operating Procedure (SOP) to streamline 3D printing workflow and ensure consistency
- Gained proficiency in Unity in 2 months to facilitate seamless handover of 4 Virtual Reality (VR) Final Year Projects (FYPs) to the organisation

ACADEMIC PROJECTS

Pohang University of Science and Technology

Pohang, South Korea

Human-Robot Interface, Team Member

September 2023 - December 2023

- Developed a maze game with force feedback in 6 weeks, enhancing user immersion by simulating physical interactions with virtual obstacles in C++ using a 2-DOF haptic development device
- Integrated the virtual obstacles with a simple user interface in Python to allow for a more seamless user experience.

Singapore University of Technology and Design

Singapore, Singapore

Healthcare Product Design, Game Development Lead

September 2024 - December 2024

- Led the development of a sensor-integrated reminiscence therapy game in Unity to enhance cognitive well-being in dementia patients through interactive cooking simulations in 8 weeks.
- Developed interactive gameplay mechanics using C# scripting and Animations in Unity, enabling real-time user interactions with virtual kitchen tools and market environments.

CO-CURRICULAR ACTIVITIES

Dance DerivativeZ

Singapore, Singapore

Executive Committee, President

June 2023 - May 2024

- Led the overall direction, vision and goals of the club with 60 members, ensuring efficient operations and alignment with executive committee input.
- Monitored all club activities, successfully organizing 7 major events while ensuring smooth execution and alignment with club objectives

ADDITIONAL INFORMATION

- **Technical Skills:** Proficient: Solidworks, Autodesk Fusion360, Microsoft Office, Google Workspace, Unity (3D environment and C# Scripting), Project Management (JIRA); Basic: Java, C++, Python,
- **Languages:** Fluent in English and Bahasa Indonesia; Conversational Proficiency in Korean and Chinese