

Michelle Angela Widjaja

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Portfolio: michelleangela8.github.io

PERSONAL PROFILE

An enthusiastic Engineering Product Development undergraduate passionate about mechanical design and product development. Skilled in 3D prototyping and user-centred design to create innovative and functional products in the Healthcare Engineering industry.

EDUCATION

Singapore University of Technology and Design

September 2021 – May 2025

- Bachelor of Engineering (Engineering Product Development)
- GPA 4.14/5.0
- 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

Singapore University of Technology and Design

Capstone Programme, SafeGait, Mechanical Design Lead

September 2024 – April 2025

- Spearheaded the mechanical design development of a wearable gait monitoring device aimed at early detection of workplace heat-related fatigue, collaborating in a multidisciplinary team of six.
- Designed and fabricated through multiple iterations with compact 3D-printed housings and custom-sewn textile enclosures for ergonomic, body-mounted use.
- Acted as the primary liaison with the industry mentor, translating feedback into actionable steps and aligning the team's technical direction with industry expectations.

Singapore University of Technology and Design

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 (SUTD)

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