

Tyrone Justin R. Sta. Maria

Email: tyrone.stamaria35@gmail.com LinkedIn: [Tyrone Sta. Maria](#) Github: [TyroneStaMaria](#)
Website: <https://tyronejust.in>

Summary

I am a graduate of De La Salle University with a Bachelor's degree in Computer Science, specializing in Software Technology. I am currently working as a Full-Stack Developer at The Outsource People, where I contribute to building scalable web applications across both frontend and backend systems. Alongside my professional work, I continue to pursue research on gesture-based control systems for swarm robotics. I also previously served as the cohort leader of the DLSU Human-X Interactions Lab (formerly COMET), where I led initiatives and managed research center activities.

Research Overview

I am currently exploring potential research areas to concentrate on, with a particular interest in Human-Computer Interaction (HCI). My current focus lies in the design, development and evaluation of Augmented Reality (AR), Tangible Interfaces, and Gesture-based Interactions for controlling robots, as novel approaches to enhancing human interaction with digital and physical systems.

Research Interests and Themes

Human-Computer Interaction, Augmented Reality, Mixed Reality, Tangible User Interfaces, Programming Learning, Robotics

Education

BS Computer Science with Specialization in Software Technology

2019 - 2024

De La Salle University (GPA:3.5/4.0 cum laude)

- Thesis: A Tangible Mixed Reality Training System for Teaching Pointers

Publications

[5] **Tyrone Justin Sta. Maria**, Faith Griffin, and Jordan Aiko Deja. 2025. Set the Stage: Enabling Storytelling with Multiple Robots through Roleplaying Metaphors. In Adjunct Proceedings of the 38th Annual ACM Symposium on User Interface Software and Technology (UIST Adjunct '25). Association for Computing Machinery, New York, NY, USA, Article 114, 1–3. <https://doi.org/10.1145/3746058.3758426>

[4] F. Griffin, K. Abelgas, K. R. Tahimic, A. K. Chua, J. A. Deja, and **T. J. Sta. Maria**, 'How Fitts' Fits in 3D: A Tangible Twist on Spatial Tasks', arXiv preprint arXiv:2412. 00506, 2024. Proceedings of the CHIRP 2024.

[3] **T. J. Sta. Maria** and J. A. Deja, 'Alexa, I Wanna See You: Envisioning Smart Home Assistants for the Deaf and Hard-of-Hearing', Proceedings of the CHIRP 2024. arXiv [cs.HC]. 2024.

[2] R. L. Parayno, J. A. Deja, **T. J. Sta Maria**, B. P. Samson, and J. Deja, "Good Day Manager! Exploring Social Relationships in NFT-based Play-to-Earn Games", in Proceedings of ACM CHI Conference on Human Factors in Computing, 2023, pp. 1–11.

[1] **T. J. S. Maria**, G. R. Dizon, V. A. Esquivel, J. Deja, and U. Chua, “Designing Grit: Discovering Features Towards Supporting Novice Programmer DevOps Integration”, in Proceedings of the 2020 Symposium on Emerging Research from Asia and on Asian Contexts and Cultures, 2020, pp. 41–44.

Organization Experience

User Experience Philippines (UXPH) Web and Research Volunteer	2020 - 2023
ACM SIGCHI Manila Chapter (CHI MNL) Web Chair	2020 - present

Research Experience

DLSU Human X Interactions Lab (formerly COMET) Cohort Leader (2022-2024) - A Tangible Mixed Reality Training System for Teaching Pointers - Controlling Robotic Swarms with Roleplaying Metaphors (ongoing)	2020-present
User Experience Philippines (UXPH) Research Volunteer - State of UX in the Philippines (SOUP) Report	2021

Work Experience

The Outsource People Full-stack Developer - Software Development, Databases, Backend development, Front-end development	Jun 2024 - Present
Weather, Environment and Hydromet Monitoring System (WEHLO) Backend Developer - Software Development, Databases, API development, Websockets	Jan 2023 - Dec 2023
NextPay (YC W21) Data Engineer Intern - Data pipelines, ELT, Databases, SQL	Apr 2022 - Aug 2022
Orange and Bronze Software Labs, Inc. Software Engineer Intern - Software Engineering, Agile, Web Applications	May 2021 - Jul 2021
Freelance Website Developer - Web Applications, Wordpress, Shopify	Jan 2021 - Present

Skills

- **Software:** Typescript, NodeJS, Python, Kotlin, SQL, HTML, CSS, ReactJS, Unity, C#
- **UX Prototyping:** Figma, Wireframing
- **Research:** Questionnaires, Affinity Maps, Personas, quantitative and qualitative methods

