

Davis Nicholo Magpantay

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Education

Kyoto University, Department of Chemical Science and Technology Expected Mar 2029

- Cumulative GPA: 4.24/4.0 (*The university's grading system allows for A+ grades, which are calculated as 4.3)
- Recipient of a full scholarship under the Mitsubishi Gas Chemicals Memorial Foundation
- Notable coursework:** Seminar on Smart Materials, Basic Physical Chemistry (Quantum Theory), Fundamental Chemical Experiments, Philosophy of Modern Science

Philippine Science High School - Main Campus, Highschool Diploma Aug 2018 - Jul 2024

- GWA: 1.02/1.0 (Rank 1/232)
- Key awards:** Excellence in Chemistry, Excellence in Computer Science
- Notable coursework:** Frontiers of Chemistry, Data Structures and Algorithms, S&T Research

Projects & Experience

Chemaya: Gesture-Controlled Virtual Chemistry Lab » GitHub Repo

- Led the development of an accessible virtual chemistry lab in React.js, integrating Google MediaPipe to create a hand-gesture-based user interface.
- Trained and deployed a custom gesture recognition model with 80%+ accuracy using a combination of in-house and external datasets (HaGRID), validating the application's performance against traditional labs through user testing.

Shock Electrodialysis Apparatus

- Secured \$1,500 USD in funding (Department of Science and Technology, Young Innovators Program) by being selected as a project from a pool of 70+ teams.
- Designed, fabricated, and tested a modular desalination prototype, collaborating with University of the Philippines - Diliman faculty members to guide implementation.

Leadership & Involvement

Mentor, Bayanihon JUMPStart Oct 2024 - Present

- One of the founding mentors of a network of Filipino scholars in Japan to mentor high school students through the complex university and scholarship application process.
- Aided a cohort of 10+ mentees in securing admissions to 5 prestigious Japanese universities, including Kyoto University, Hokkaido University, and Nagoya University.
- Coordinated with funding companies for information sessions and potential scholarship opportunities for highschool students

Notable Awards

Silver Medalist (Top 10), Philippine National Chemistry Olympiad 2023, 2024

Bronze Medalist (Top 10), National Olympiad in Informatics - Philippines 2024

Distinction (Top 11), Singapore Intl. Math. and Computational Challenge 2024

The National Scientist Dr. Angel C. Alcala Award for Excellence in Science 2024

Outstanding Delegate, Hwa Chong Institution Asia Pacific Youth Leaders Summit 2022

Skills & Languages

Technical skills: Python (Numpy, Pandas, Scikit-learn), Git, Astro, Tailwind CSS, React.js

Languages: English (fluent), Filipino (native), Japanese (limited working proficiency)