

Angelo L. De Castro

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EDUCATION:

University of St. La Salle (USLS)

Bacolod City, Negros Occidental, Philippines

B.S., Electronics Engineering

Date Conferred: May 29, 2022

Liceo - De La Salle

Bacolod City, Negros Occidental, Philippines

Senior High School Diploma

Science, Technology, Engineering & Mathematics Track

Date Conferred: April 6, 2018

Don Bosco Technical Institute

Victorias City, Negros Occidental, Philippines

Junior High School Diploma

Electronics Technology

Date Conferred: April 3, 2016

WORK EXPERIENCE:

Talarak Foundation Inc.

Bacolod City, Negros Occidental, Philippines

Communications Engineering Intern

Inclusive Dates: (June 1 - August 3, 2021)

- Responsibilities
 - Conducted research and design of tracking systems for wild forest animals using IoT and machine learning
 - Assisted in writing and debugging of software
 - Provided weekly reports and updates to engineering advisers and wildlife reserve biologists

RESEARCH EXPERIENCE:

Tan Medical Image and Signal Processing Group

Bacolod City, Negros Occidental, Philippines

Senior Engineering Research Assistant

- Senior Capstone Project:
 - “Developing an Automated and Cost-Effective Animal Observation and Tracking System with the use of IoT and Machine Learning”
 - Adviser: Myles Joshua T. Tan, Assistant Professor of Engineering/Natural Sciences
 - Oral Examination Committee: Nouar AlDahoul, PhD (Chief Technology Officer, Yo-Vivo Corporation); Marie Fe Novia, MS (Department Chairperson and Assistant

Professor, Department of Electronics Engineering, USLS); Vinosh Mathuranayagam, MS
(Chief Information Officer, Yo-Vivo Corporation)

- Special Topics Project :
 - “The Ebb of Fiat and the Flow of Cryptocurrencies”
 - Adviser: Myles Joshua T. Tan, Assistant Professor of Engineering/Natural Sciences

PUBLICATIONS:

Preprints:

- “The Ebb of Fiat and the Flow of Cryptocurrencies”
 - First author
 - Adviser: Myles Joshua T. Tan, Assistant Professor of Engineering/Natural Sciences
 - Available: <https://doi.org/10.31219/osf.io/trpwc>

Peer Reviewed Journal Articles:

- “Localization and Classification of Space Objects using EfficientDet detector for Space Situational Awareness”
 - Published to *Scientific Reports* on July 23, 2022
 - Available: <https://doi.org/10.1038/s41598-022-25859-y>

Peer Reviewed Conference Proceedings:

- “Development of a Detection System for Endangered Mammals in Negros Island, Philippines Using YOLOv5n”
 - Co-first author
 - Published to *Ninth International Conference on Computational Science and Technology (ICCST2022)*, Malaysia
 - Awarded as the “Best Student Paper”
 - August 27-28, 2022
 - Available: https://doi.org/10.1007/978-981-19-8406-8_35

TEACHING EXPERIENCE:

University of St. La Salle

Bacolod City, Negros Occidental, Philippines

Lead Laboratory Teaching Assistant

Biomedical Devices and Instrumentation (Undergraduate Level)

- Second Semester, 2021 - 2022
- Course Instructor: Myles Joshua T. Tan, Assistant Professor of Engineering/Natural Sciences
- Department of Natural Sciences, College of Arts and Sciences
- Class size: 22 (1 section)
- Responsibilities:

- Gave lectures on Mathematical Foundations, Python Crash Course, Jupyter Notebook Environment, NumPy, Matplotlib, and Seaborn
- Led a group of 7 laboratory teaching assistants
- Graded homework and papers
- Kept records of student evaluations and grades
- Responded to students' questions regarding assignments requirements and grading policies

University of St. La Salle

Bacolod City, Negros Occidental, Philippines

Grader

Science, Technology, and Society (Undergraduate Level)

- First Semester and Second Semester, 2021 – 2022
- Course Instructor: Myles Joshua T. Tan, Assistant Professor of Engineering/Natural Sciences
- Department of Natural Sciences, College of Arts and Sciences
- Class size: 42 (1 section; first semester); 41 (1 section; second semester)
- Responsibilities:
 - Graded homework and papers
 - Kept records of student evaluations and grades
 - Responded to students' questions regarding assignments requirements and grading policies

University of St. La Salle

Bacolod City, Negros Occidental, Philippines

Teaching Assistant

Differential Equations (Undergraduate Level)

- First Semester, 2019 – 2020
- Course Instructor: Myles Joshua T. Tan, Assistant Professor of Engineering/Natural Sciences
- Department of Chemical Engineering, College of Engineering and Technology
- Class size: 30 (1 section)
- Responsibilities:
 - Provided lectures on the applications of First-Order Linear Ordinary Differential Equations to finance
 - Assisted in the development of course materials
 - Assisted students with Python modeling labs

LICENSE:

Professional Regulation Commission

Sampaloc, Metro Manila, Philippines

- Electronics Engineer
 - License No.: 007****
 - Expiration: July 29, 2025
 - Status: VALID

WORKSHOP GIVEN:

Series: 1st Annual CAS-CET Discipline-Specific Lecture and Workshop Series on Computational Life and Health Sciences

Theme: Augment: Life Understood and Enhanced Through Computation

Workshop: Basics of Computer Programming in Python and Geographical Plotting Workshop (Business and Economics Cluster)

Audience: Faculty of the College of Engineering and Technology, College of Arts and Sciences, and Yu An Log College of Business and Accountancy, USLS

Time/Date: 9AM to 11AM, 1PM to 3PM; July 18, 2022

SPECIAL LECTURE GIVEN:

Title: Applications of Image Compression using Singular Value Decomposition

Adviser: Engr. Myles Joshua T. Tan, Assistant Professor of Engineering and Natural Sciences

Audience: Faculty of the Department of Electronics Engineering, USLS

Date: First Semester A.Y. 2019 – 2020 (October 25, 2019)

SKILLS:

Technical: Python™, MATLAB®, Microsoft® Office®, NI Multisim™, IoT (ESP8266, MQTT, Node.js®), Machine Learning (TensorFlow, Keras), Proteus, GNS3®, Quartus, AutoCAD®, LaTeX (Overleaf), Welding, Soldering, Breadboarding, HTML5, CSS3

Languages: Hiligaynon (L1), English (L2, IELTS = 7.0), Tagalog (L2)