

# Nathan T. de Vera, ECE

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ntdevera.github.io

## Experience

### GRADUATE RESEARCH ASSISTANT | PHL-MICROSAT STAMINA4SPACE | JAN 2019-DEC 2020

- Research on a Unity C# Based Diwata 2 Attitude Control Simulation for Reinforcement Learning Optimization
  - Created a weight-based model simulation of Diwata 2 satellite under unity, for accurate force reactions of mass form and reaction wheel locations/mass
  - Accurate interactive reaction wheel attitude control of Diwata 2.
  - Reinforcement Learning for target attitude control using Soft Actor Critic (SAC) algorithm
- Design, fabrication and testing RF filters, controllers and amplifiers for ARU system and other RF projects
- Troubleshooting and management of ARSS ground receiving station. Repair work on UHF/VHF Antennas.
- RF hardware maintenance and testing.
- Conducted training programs and showcase presentations for local and international institutions on satellite communications

### STUDENT ASSISTANT | VBTS PROJECT-PCARI | JUNE 2017-DEC 2018

- Test and evaluation using communication equipment such as SDRs, HF Power Amplifiers and Duplexers using Vector Network Analyzers and Power Meters.
- Handle initialization and system integration for 6000 units of SIM.
- Designed and implemented a data compilation and interpretation system for 8 base stations reports using python and bash script

### TECHNICAL ENGINEER - TEAM MANAGER | ICROSS HOLDINGS | MAY 2015-JUNE 2018

- Created a Website sample and oversaw the implantation of an HRIS for a government contract.
- Setup of sound and lights system for large scale areas of a hotel-resort
- Multiple CCTV/Security system contracts implemented.
- Team manager/Staff coordinator during HR trainings events.
- Spearheaded initial projects on government procurement for electronic laboratory supplies

## Activities

### APPLICATION HEAD | WIRELESS COMMUNICATION ENGINEERING LABORATORY (WCEL) UP EEEL | JUN 2017-DEC 2018

- Managed over 70 students on a yearlong application for the laboratory. Including training, lectures, technical reports and projects on wireless communications systems
- Oversaw and mentored projects from other universities that requested RF equipment usage.

### FINANCE HEAD | MUAY-THAI UP | JUN 2018-DEC 2020

- Managed the financials of an organization with over 50 active members (and over 50 applicants per semester).
- Regular martial arts training (2x a week) and training of applicants.
- Spearheaded the organization registration renewal process for AY2020

## Education

### UNIVERSITY OF THE PHILIPPINES DILIMAN

- Masters in Electrical Engineering (Jan 2019-On Going), ERDT Scholar
- Bachelors in Electronics and Communications Engineering (Jan 2019)
- Licensed ECE, 84.5 Rating.

## Skills

- Proficient in Python, C#, C, and Microsoft Office
- Experience in Web (mySQL, Python Django) Unity game development and Git.
- Experience in RF communication systems and computer networks.
- Research Track is currently on Deep Reinforcement Learning, Neural Networks and Data Processing.