

EDUCATION

National University of Singapore (Singapore): Ph.D. Engineering

Thesis: Cohort-based Personal Comfort Models for HVAC Occupant-Centric Control

Carnegie Mellon University (USA): Master of Info. Sys. Mngmt.

Relevant coursework: Data Mining; Machine Learning; Data Structures and Algorithms

Pontifical Catholic University of Peru (Peru): B.Sc. Electronic Eng.

2018-Present
2015-2016
2015-2016

Relevant coursework: Electronic Design; Computer Architecture; Web Technologies

WORK AND RESEARCH EXPERIENCE

College of Design and Engineering, National University of Singapore

Singapore, SG

Postdoctoral Research Fellow (BUDSLab)

08/2022 - Present

Email: matias@u.nus.edu

Phone: +65 9246 5603

- Led the research group projects in machine learning, computer vision, and agent-based modeling.
- Mentored 3 Ph.D. students in research projects and their theses.
- Taught laboratory sessions for graduate and undergraduate modules in Data Science and AI.

College of Design and Engineering, National University of Singapore

Singapore, SG

Graduate Research Assistant (BUDSLab, SinBerBEST2)

08/2018 - 08/2022

- Performed applied machine learning research on Building Energy data (15 papers published, 8 first author).
- $\circ \ \ \text{Mentored 9 B.Sc. Project and Facilities Management and 1 M.Sc. Computer Science students in their theses.}$
- Created main content and assignments for MOOC Data Science for Construction, Architecture and Engineering (2021 edX Prize Finalist for Innovation in Online Teaching).

VIT Initiative, LLC. (Acquired by SWORD Health)

Pittsburgh, US

Firmware & Mobile Developer

12/2017 - 06/2018

- Designed and performed demonstration of finalized wearable product on clients' site and funding events.
- $\circ\,$ Designed and developed mobile application for we arable products.

Civil and Environmental Engineering Dept., Carnegie Mellon University

Pittsburgh, US

Graduate Research Assistant, Intelligent Infrastructure Research Lab (INFERLab)

04/2017 - 06/2018

- Collaborated in DOE funded project about Building Energy Efficiency (3 papers published, 1 first author).
- Designed and implemented a data preparation and evaluation framework with Bosch U.S. research scientists for RGBD building occupancy data.
- o Designed and programmed an AC waveform power meter based on an Atmega328p for the Raspberry Pi.

Banking Commission of the Republic of Marshall Islands

Majuro, MH

Technology Consultant

05/2016 - 07/2016

- Assessed and improved technology infrastructure and information management stack (Final Report).
- o Designed and implemented data collection and analysis solution for the Financial Intelligence Division.

University & Public Engagement

•	Office of Student Affairs, NUS	Singapore, SG
	Resident Assistant and Secretary	06/2020 - 06/2022
•	Building Research Students Network, CDE-NUS	Singapore, SG
	President; former Treasurer	08/2019 - 07/2022
•	Office of Student Affairs, NUS	Singapore, SG
	$Mentor\ at\ Teach\ with\ Heart@Tanglin\ Secondary\ School$	07/2019 - 10/2019
•	Internet of Things Club, Carnegie Mellon University	Pittsburgh, PA
	Co-founder and Technical Director	06/2016 - 12/2016
•	Latino Graduate Student Association, Carnegie Mellon University	Pittsburgh, PA
	President; former Treasurer	08/2015 - 12/2016

SKILLS

- Languages: Spanish, English, French, Chinese
- Programming & Scripting languages: Python, Bash, SQL, JAVA, R, MATLAB, C/C++