John Ray Martinez

AWS Certified Machine Learning Specialist with experience in recommendation systems, NLP, and time series. PhD Candidate researching multi-agent AI systems with focus on uncertainty quantification, confidence-weighted prediction fusion, and LLM reliability. Recipient of Outstanding Graduate Student Award, Drexel University 2021. Data Professional with 10+ years of software engineering experience and a teaching background in Physics.

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WORK EXPERIENCE

Data Scientist
Nicholas & Company

07/2021 - Present   *(4 years) Salt Lake City UT, USA*

Achievements/Tasks
- Built the machine learning infrastructure and recommendation systems from the ground up, establishing technical foundation for personalized eCommerce.
- Developed and implemented machine learning products to support the eCommerce recommendation system and personalization experience for nicco-online customers.
- Architected AWS-based ML pipeline using Redshift, SageMaker, Lambda, and S3 enabling recommendation system and personalization at scale.
- Maintain data infrastructure (HVR, Matillion, Looker) and develop integration solutions using Boomi and Matillion, creating unified data platform for ML applications.
- Apply multi-agent system principles from PhD research to improve recommendation accuracy through confidence-weighted model fusion.

Data Scientist
DXC Technology (Applied AI Center of Excellence)

09/2019 - 06/2021   *(2 years) Philadelphia PA, USA*

Achievements/Tasks
- Developed and deployed predictive models that provide predictions about resolution time interval of service tickets.
- Developed a multiple linear regression with Kalman filtering model for projecting COVID19 risk down to an individual employee level.

Senior Software Engineer / IT Consultant
Various Companies (J.P. Morgan Chase, Software International, Safeway)

05/2010 - 09/2019   *(9 years) International (Philippines, Malaysia)*

Achievements/Tasks
- Led enterprise software development and system integration projects across financial services, insurance, and retail sectors.
- Architected and implemented large-scale data processing solutions and system conversions.
- Developed expertise in complex system integration and data engineering that now underpins ML infrastructure work.

CERTIFICATES

AWS Certified Machine Learning - Specialty
 (05/2023 - 05/2026)
This certification validates expertise in building, training, tuning, and deploying machine learning (ML) models on AWS.

SKILLS

Python   R   SQL   PySpark   Scikit-Learn   TensorFlow   Keras   AWS Redshift   AWS S3   AWS SageMaker   AWS Lambda   AWS API Gateway   HVR   Matillion   Looker   Boomi

EDUCATION

Doctor of Philosophy in Data Science (PhD Candidate)
Harrisburg University of Science and Technology

05/2024 - Present   *Harrisburg, PA , USA*
Cumulative GPA: 4.0
- All But Dissertation (ABD) - Passed comprehensive examinations
- Dissertation: "Verification-Enhanced Multi-agent LLM for Medical Diagnosis"
- Expected completion: May 2027

Master of Science in Data Science
Drexel University

09/2019 - 06/2021   *Philadelphia, PA, USA*
Cumulative GPA: 4.0
- Recipient of 2021 Outstanding Graduate Student Award, Drexel CCI.
- Published an international paper "The Impact of driver distraction and secondary tasks with and without other co-occurring driving behaviors on the level of road traffic crashes" in the best journal of 'Human Factors and Ergonomics' according to Scimago Journal Ranking (Accident Analysis and Prevention).
- Capstone Project: "Multimodal Brain Tumor Segmentation using Convolutional Neural Network" which was selected for oral research presentation at the 2021 Drexel Emerging Graduate Scholars Conference.

Bachelor of Science in Physics with Specialization in Computer Applications / Bachelor of Secondary Education Major in Mathematics
De La Salle University - Manila

05/2002 - 08/2006   *Taft Manila, Philippines*

TEACHING EXPERIENCE

Physics Instructor (06/2008 - 05/2009)
Physics Department, Central Mindanao University, Maramag, Bukidnon Philippines
Taught university physics to students in engineering and the sciences. Designed curriculum and assessments to improve student learning outcomes.

Physics Instructor (06/2007 - 05/2008)
National Institute of Physics, University of the Philippines, Quezon City Philippines
Taught university physics to students in engineering and the sciences.