Arjun C Unni, Financial engineer

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LINKS

linkedin, Github

PROFILE

Doctorate in Energy with a specialization in renewable energy modeling and risk analysis. Experienced in developing and implementing models for resource planning, energy market forecasting, and financial optimization. Proficient in MATLAB and Python for energy systems modeling and data analysis. Proven track record in energy policy studies and collaboration with energy teams for sustainable solutions. Expertise in market risk analysis and renewable energy investments, with a focus on integrating financial and energy models to drive decision-making in the energy sector.

EMPLOYMENT HISTORY

Apr 2021 — Aug 2024   **Associate Director-Product, Pi Securities PCL**   Bangkok

- Conducted quantitative analysis and created ready-to-buy portfolios using global ETFs personalized to each investor according to their risk aversion.
- Worked on complex wealth solution products such as Robo-Advisors, structured notes, and alternative investments.
- Developed portfolios using Python and modern portfolio theory, incorporating risk parameters such as VaR and CVaR.
- Utilized Monte Carlo analysis for stress testing.
- Assisted in ad hoc tasks such as onboarding banks with diligent documentation for the legal and compliance team, migrating from Excel to Python, and creating enhanced Excel templates using advanced VBA coding.
- Created financial models for five stocks and five REITs to generate buy and sell recommendations.

Aug 2017 — Dec 2020   **Research Assistant, Asian Institute of Technology**   Bangkok

- Taught MATLAB and Python to master's students, covering topics from variable definitions to complex optimization algorithms like particle swarm optimization, applied to load flow analysis.
- Conducted research in deregulated power markets, including options, futures, and derivatives. Developed a novel fuzzy logic index to define a new risk-reward metric and applied it to renewable energy source planning.
- Performed statistical, qualitative, and quantitative analysis to support various research initiatives.
- Conducted rigorous research in financial modeling using MATLAB, Python, and Excel.

Jan 2014 — Jul 2016   **Assistant Professor, Royal Engineering College and Technology**   Thrissur

- Applied innovative teaching methods to enhance student learning objectives for eight courses.

EDUCATION

Aug 2016 — Dec 2020   **Doctor of Philosophy, Asian Institute of Technology**   Bangkok

Graduated as Valedictorian

Aug 2011 — Dec 2013   **M-Tech in Power Electronics and Drives, Visvesvaraya National Institute of Technology (VNIT), Nagpur**   Nagpur

Achieved a major milestone by building real-time controllers for a MAGLEV system as part of control systems project.

Aug 2006 — Apr 2011   **Electrical Engineering, National Institute of technology(NIT)**   Raipur

SKILLS				
	Securities (Finance)	Expert	Python (Programming Language)	Experienced
	Research	Expert	MATLAB	Experienced
	Renewable Energy Modeling	Experienced	Microsoft Office	Experienced
	Financial Modeling	Experienced	Product Development	Experienced
	Quantitative Analysis	Experienced		

LANGUAGES				
	English	Highly proficient	Hindi	Very good command
	Malayalam	Native speaker		