

# ANUBHAVSINGH SAWDAGUR

PhD Candidate | AI Researcher | Cybersecurity Specialist

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## EXECUTIVE PROFILE

**Dual-Domain Specialist** with a professional engineering track record **spanning since 2018**, merging **Offensive Cybersecurity** with **Artificial Intelligence**. Currently advancing the field of automated decision-making systems through PhD research on condition-adaptive trading strategies (LSTM/Transformers). Renowned for a rigorous analytical approach and the ability to bridge the gap between academic theory and industry application. Dedicated to solving non-stationary data challenges through rigorous stochastic modeling and secure code implementation.

## RESEARCH & INNOVATION

**PhD Research: AI-Enhanced Adaptive Trading Frameworks** University of Mauritius | Sep 2025 – Present

- **The Challenge:** Traditional algorithmic trading fails during "regime shifts" (e.g., market crashes or volatility spikes).
- **The Innovation:** Developing a **"Multi-AI" Ecosystem** that operates exclusively on technical indicators. The system utilizes a "Master Strategy" algorithm to autonomously switch between specialized neural networks (LSTM vs. MLP) based on real-time market state detection.
- **Key Tech:** Python, Deep Reinforcement Learning (DRL), Transformers, Volatility Modeling.

**BSc Capstone: Automated Web Application Auditing Framework** Leeds Beckett University | 2020

- **The Innovation:** Architected an **Automated Web Application Auditing Framework with AI Integration**.
- **Technical Approach:** Designed intelligent, rule-based automation logic to autonomously scan, detect, and classify web vulnerabilities (SQLi, XSS) without human intervention.
- **Impact:** This research was pivotal in achieving **First Class Honours** and receiving the university's highest academic distinction.

## TECHNICAL ARSENAL

<b>AI &amp; Quantitative Analysis</b>	Deep Reinforcement Learning (DRL), LSTM, Transformers, Ensemble Learning, Bayesian Hyperparameter Tuning (Hyperopt), Feature Engineering.
<b>Cybersecurity Operations</b>	Penetration Testing, Incident Response, Digital Forensics, Malware Analysis, AV Evasion, OWASP Top 10, Privilege Escalation (Linux/Windows).
<b>Development &amp; Scripting</b>	<b>Python</b> (Pandas, NumPy, Scikit-Learn, PyTorch), <b>Bash Scripting</b> , C# (MVC Framework), PHP (Laravel), SQL, RESTful APIs.
<b>Infrastructure</b>	Docker Containerization, VMware Virtualization, Linux/Windows Server Administration, Secure Network Architecture.

## CORE COMPETENCIES & LEADERSHIP

- **Technical Pedagogy:** Proven ability to simplify complex concepts (Cryptography, Routing Protocols) for diverse audiences, derived from 6+ years of lecturing experience.
- **Research Communication:** Skilled in writing high-level technical proposals and documentation, bridging the gap between academic theory and practical application.
- **Strategic Problem Solving:** Expertise in designing architectural solutions that balance performance with security compliance.
- **Mentorship:** Experienced in guiding students through capstone projects and fostering a collaborative research environment.

## PROFESSIONAL EXPERIENCE

**Lecturer: Advanced Networking & Security Curriculum** Mar 2019 – Present  
*Training Center of Excellence (TCoE)* Mauritius

- **Subject Matter Expert:** Solely responsible for delivering the **Advanced Networking and Security** syllabus.
- **Curriculum Design:** Modernized teaching materials to include practical labs on Network Defense, Routing Architectures, and Switching Protocols.
- **Impact:** Consistently commended by directorship for high student engagement and the ability to adapt teaching styles to individual learning needs.

**Full-Stack Software Developer** Jan 2018 – Feb 2019  
*Infini Tech Ltd* Mauritius

- **Secure Development:** Engineered enterprise-grade web applications using **C# and ASP.NET MVC**. Focused heavily on "Security by Design" to mitigate SQL Injection and XSS risks.
- **Database Architecture:** Managed complex schemas on **MSSQL and Oracle** platforms, optimizing query performance for high-volume data processing.
- **Enterprise Integration:** Implemented Windows Authentication protocols for seamless internal Identity Management.

## EDUCATION

<b>Doctor of Philosophy (MPhil/PhD) in Information Systems</b> <i>University of Mauritius</i> Focus: <i>Machine Learning Applications in Financial Markets.</i>	<i>Enrolled: Sep 2025</i> <i>Réduit</i>
<b>B.Sc. (Hons) Computer Forensics (First Class Honours)</b> <i>Leeds Beckett University (UK)</i> Focus: <i>Forensics Analysis and Offensive Security.</i>	<i>Graduated: 2020</i>

## HONOURS & CERTIFICATIONS

- **Outstanding Achievement Award (2020):** Awarded by Leeds Beckett University for exceptional academic performance and technical excellence in Computer Forensics.
- **Offensive Security Certified Professional (OSCP):** *Candidate (In Progress).*

## REFERENCES

<b>Dr. Raj Kishen Moloo</b> Associate Professor University of Mauritius <a href="mailto:r.moloo@uom.ac.mu">r.moloo@uom.ac.mu</a>	<b>Dr. Irfaan M. Coonjah</b> Director, TCoE +230 575 68281 <a href="mailto:irfaan.coonjah@gmail.com">irfaan.coonjah@gmail.com</a>	<b>Dr. Priya R. Essoo</b> Academic Director Rushmore Business School <a href="mailto:priya.ramluggun-essoo@rbs.ac.mu">priya.ramluggun-essoo@rbs.ac.mu</a>
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