Tiet Thanh Minh Hieu

AI Security Researcher | Information Security Student

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EDUCATION

Ho Chi Minh City University of Technology (HUTECH)   Ho Chi Minh City, Vietnam
Bachelor of Computer Science, Specialization in Information Security   *Sep. 2022 – May 2026*

- GPA: 3.52/4.0 (Most Recent Semester: 3.83/4.0)
- Relevant Coursework: Malware Analysis, Machine Learning, Network Security, Cryptography, Database Systems

RESEARCH EXPERIENCE

Student Research Program   Oct. 2025 – Present
HUTECH | Advisor: Ms. Dinh Huynh Tue Tue   *Ho Chi Minh City, Vietnam*

- Investigating Function Call Graph (FCG) and Better Call Graph (BCG) analysis for detecting advanced Android malware evasion techniques
- Designing Graph Neural Network architecture to identify malicious execution patterns resistant to obfuscation
- Selected as **Top 10 of 60+** research proposals for direct advancement without preliminary review
- **Tech Stack:** Python, NetworkX, PyTorch Geometric, Androguard

Senior Capstone Project   Sep. 2025 – Present
HUTECH | Obfuscated Android Malware Detection   *Ho Chi Minh City, Vietnam*

- Processing CICMalDroid 2020 benchmark dataset (**70GB+, 13,205 malware + benign samples**) for obfuscation-resistant detection
- Built automated APK analysis pipeline achieving **94.3% successful extraction rate** using Androguard
- Implementing obfuscation techniques (ProGuard) to create adversarial test set for model robustness evaluation
- Approved as **1 of 22** senior projects without revision requirement
- **Tech Stack:** Python, BERT, Androguard, ProGuard, Flask/FastAPI, YARA

Foundation Course Project   Apr. 2025 – Jun. 2025
HUTECH | Android Malware Detection using BERT   *Ho Chi Minh City, Vietnam*

- Developed BERT-based classification model achieving **94% accuracy** on MH-100K dataset (100,000 samples)
- Outperformed baseline CNN (74%) and LSTM (69%) models by **+20%** through contextual permission and API call analysis
- Resolved severe class imbalance: improved malware recall from **5% → 89%** using SMOTE and weighted loss functions
- **Ranked #1 in class** with score of 9.0/10
- **Tech Stack:** Python, TensorFlow, BERT, Scikit-learn, Pandas, NumPy

TECHNICAL SKILLS

Languages: Python (Advanced), Java, SQL, JavaScript
ML/AI Frameworks: TensorFlow, PyTorch, BERT, Transformers, Scikit-learn, Pandas, NumPy, Matplotlib
Security Tools: Androguard, YARA, ProGuard, Wireshark, Nmap
Web/APIs: Flask, FastAPI, REST API
DevOps & Tools: Git, Linux/Ubuntu, Docker, Jupyter, VS Code
Databases: MySQL, MongoDB

CERTIFICATIONS

AWS Academy Cloud Security Foundations (In Progress)   *2025*

- Invitation-only program by Amazon Web Services

Google Cybersecurity Professional Certificate (In Progress)   *Expected: Dec. 2025*

Cisco Networking Academy   *2024*

- Networking Basics | JavaScript Essentials 1 & 2

Honors & Achievements

Top Student Award - Foundation Course (2025): Ranked #1 in class (9.0/10) for BERT-based malware detection

Student Research Program - Direct Advancement (2025): Selected as Top 10 of 60+ proposals without preliminary review

Consistent Academic Improvement (2025): Achieved 3.83 GPA in Year 3 (up from 3.52 cumulative)

Additional Information

Languages: Vietnamese (Native), English (Professional Working Proficiency)
Technical Blog: Documenting AI Security research journey and practical cybersecurity insights
GitHub: Active portfolio with research projects and open-source contributions
Interests: Malware Analysis, Machine Learning Security, Graph Neural Networks, Cloud Security