Ahmed Taha (Taeha)
Patent Examiner | Machine Learning & Cybersecurity Specialist
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Education

Columbia University, Fu Foundation School of Engineering
M.S. Computer Science (Machine Learning) | *January 2026 – December 2026*
Thesis: (Pending advisor and topic related to Machine Learning in Cybersecurity)
Coursework: Machine Learning | Advanced Machine Learning

Johns Hopkins Whiting School of Engineering
M.S. Cyber Security | (*GPA: 3.85) August 2024 – December 2025*
Coursework: Quantum Computation | Generative AI for Cybersecurity | Generative AI and Synthetic Threats | Intro to Ethical Hacking | Foundations of Information Assurance | Web Security | Intrusion Detection | Information Assurance Analysis | Cryptology | Foundations of Algorithms
Extracurriculars: Pickleball Club & Tennis Club

California State University, Sacramento
B.S. Computer Science | (GPA: 3.45)
Extracurriculars: Wrestling Sports Club

Professional Experience

GS-9 Patent Examiner (AU 2613: Computer Graphics) | **USPTO**   *January 2025 –Present*
- Interpret and analyze claims, conduct prior-art searches, issue Office Actions compliant with the MPEP, hold Examiner interviews, aid applicants in overcoming rejections, averaging 104% production
- Proficiency in handling 35 U.S.C. § 101 rejections in the software space

Machine Learning and Cyber Security Research Student | Johns Hopkins   *September 2024 – Present*
- Conducted a Machine-Learning literature-review research paper for Professor Tom McGuire
- zenodo.org/records/15694329

Founder, Software Engineer | District Hut LLC (DistrictHut.com)   *June 2020 – January 2025*
- Led full-stack software and machine-learning projects, generating well over seven-figure revenue
- Built web-based patient-management, auto-dealer, and restaurant apps that streamlined daily operations
- Managed client servers, ran PPC/SMM/SEO campaigns, and automated workflows to boost efficiency
- Applied for and registered trademark (US Registration Number: 6560892) corresponding to company slogan

Project Highlights

Machine Learning-Based Network Intrusion Detection System
- Developed Random Forest classifier (500 trees, max depth 20) achieving 89% accuracy on multi-class attack classification (DoS, Probe, R2L, U2R) with 11% false positive rate on NSL-KDD dataset (125,973 samples)
- Engineered 41 features from network flows including byte count statistics, TCP flag distributions, service port patterns, and time-window based features (1-second and 10-second intervals)
- Applied PCA retaining 95% variance to reduce dimensionality from 41 to 25 features, improving training time by 40% while maintaining model performance within 1% accuracy
- Built proof-of-concept Flask dashboard with real-time visualization using Plotly, processing 50-100 connections/second with batch prediction and Redis caching for feature computation

Machine Learning Malware Classification System
- Trained 5-layer CNN (3 conv + 2 dense) on malware-as-images approach achieving 91% accuracy across 9 families (Trojan, Worm, Backdoor, Downloader, Spyware, Adware, Dropper, Virus, Rogue) using 10K PE file samples
- Converted PE executables to 256x256 grayscale images by interpreting raw bytes as pixel intensities, revealing visual patterns unique to each malware family's code structure
- Extracted 100+ features including top opcode 3-grams and Windows API call sequences using static analysis with pefile library, improving Random Forest baseline from 76% to 85% accuracy
- Implemented weighted ensemble voting (0.6 CNN, 0.4 RF) combining image-based and feature-based approaches, achieving 88% accuracy

Additional Courses

- **Practicing Law Institute (PLI)**
  - **USPTO Patent Bar** | *Exam Scheduled for October 2025*
  - **Patent Fundamentals Bootcamp:** An Introduction to Patent Drafting, Prosecution, and Litigation
- **The Harrity Academy**
  - **Patent Drafting Course** | *April 2025 – December 2025*
- **Finnegan IP University** | *February – March 2025*

Skills

- **Software Development:** Python, Java, C#, R, Spring Boot, Node.js, Angular.js, Express.js, MySQL, MongoDB, AWS
- **Algorithms and Frameworks:** Linear Regression, Logistic Regression, Decision Trees, Random Forests, Support Vector Machines (SVM), K-Nearest Neighbors, and Ensemble Methods, TensorFlow, Pytorch, Scikit-Learn, Keras

Volunteering

Web Developer and Spiritual Care Volunteer | Anees   *August 2021 – Present*
- Volunteered by developing and managing the organization's website and providing spiritual and emotional care to 25 underserved patients. For more information, check out myAnees.org.