

Pandu Ranga Reddy Konala

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Personal Statement

I am passionate about Cyber Security, with a strong focus on understanding its engineering principles and addressing the challenges involved. My expertise spans computer architecture, software engineering, and system security management. I am particularly interested in integrating Artificial Intelligence into cybersecurity solutions to enhance threat detection and risk management. I aim to advance my career in cyber risk management and secure systems architecture design, leveraging my domain knowledge in **Cyber Security**, **AI-driven Security Solutions**, and **Cloud/Native Systems Architecture Design**.

Academic Progress

The University of Waikato

PhD in Computer Science

- Fully funded by MBIE, New Zealand, through the AI for Human-Centric Security Catalyst project scholarship
- Research Topic: Detecting Security Smells in Software Configuration Scripts

Hamilton, New Zealand

April 2022 - Current

Lancaster University

Masters in Cyber Security

- Fully funded by Lancaster University through the Cyber Security Scholarship program
- Certified by the National Cyber Security Centre (NCSC), UK

Lancaster, United Kingdom

September 2019 - September 2020

Amrita Vishwa Vidyapeetham

Bachelor of Technology in Computer Science and Engineering

- Specialized in Cyber Security

Coimbatore, India

June 2015 - April 2019

Work Experience

Associate Scientist

School of Computing & Mathematical Sciences, The University of Waikato

- Conducting experiments and contributing to cybersecurity-related research activities.
- Providing comprehensive support to faculty and students in research projects and academic activities.
- Assisting in the design, implementation, and evaluation of academic courses to enhance student learning outcomes.

Hamilton, New Zealand

April 2022 - Current

Learning Technology & Research Support Specialist

Centre for Tertiary Teaching & Learning, The University of Waikato

- Provided technical and research support to faculty and students, ensuring smooth integration of technology in teaching and learning.
- Assisted in the development and implementation of technology-enhanced teaching methods and academic resources.
- Supported research activities by providing technical expertise and assistance with data collection, analysis, and documentation.
- Facilitated workshops and training sessions to enhance students' and faculty members' proficiency with technological tools.

Hamilton, New Zealand

September 2022 - August 2024

Software Developer

Quantum Base

- Designed and implemented secure system architectures to integrate quantum PUFs with IoT devices, bridging the gap between quantum technology and everyday applications.

Lancaster, UK

June 2020 - September 2020

Security Analyst Intern

Infosec Future Pvt Ltd

- Conducted website penetration testing, vulnerability scanning, and risk analysis using automated tools and manual techniques during an eight-week internship.
- Performed detailed information gathering to identify security risks and vulnerabilities.
- Prepared comprehensive security audit reports with findings and actionable recommendations for improvement.

Lucknow, India

May 2018 - June 2018

Red Hat System Administrator Intern

Complete Open Source Solutions (COSS)

- Gained hands-on experience in managing and maintaining Red Hat Enterprise Linux systems during a four-week internship.
- Handled system installation, configuration, performance monitoring, security management and maintained system documentation.
- Collaborated with cross-functional teams to ensure seamless integration of systems and applications.

Hyderabad, India

May 2017

Ethical Hacker Intern

Star Computers

- Gained hands-on experience in penetration testing and vulnerability assessments over a four-week period.
- Identified potential vulnerabilities and security risks in client systems and applications through various tests and assessments.
- Authored detailed reports outlining findings and provided actionable recommendations for remediation.

Vizag, India

May 2016

Professional Certifications

Red Hat Certified Engineer (RHCE)	by Red Hat, License No. 170-138-911 (2017 - 2020)
Red Hat Certified System Administrator (RHCSA)	by Red Hat, License No. 170-138-911 (2017 - 2020)
Certified Ethical Hacker (CEH)	by EC-Council, License No. ECC022209621222 (2016 - 2019)

Skills

Cyber Security Tools	Metasploit Framework, Nessus, Burp Suite, and other cyber security related tools
Programming	Python, Java, R, PHP, HTML/CSS, JavaScript, SQL, Node.js
Operating Systems	Red Hat Linux, Kali, Debian, Windows Active Directory
Virtualization Technologies	VMware vSphere, Containers (Docker)
Miscellaneous	LaTeX(Overleaf/R Markdown), Tableau, Microsoft Office, Power Automate, Git
Soft Skills	Time Management, Teamwork, Problem-Solving, Documentation, Engaging Presentations

Research Publications

A Framework for Ascertaining Quality of Infrastructure as Code Scripts

Research Paper

- International Conference on Program Comprehension (ICPC) 2025

Under Review

November 2024

SoK: Static Configuration Analysis in Infrastructure as Code Scripts

Research Paper

- IEEE International Conference on Cyber Security and Resilience (CSR), Venice, Italy, 2023

Published

August 2023

Access mechanism using inter planetary file system

Research Paper

- International Journal of Engineering and Technology, Volume 7, No 4, 2018,ISSN: 2227-524X

Published

April 2019

Securing Data in Cloud- A Physical Cyber System

Research Paper

- Journal of Computer Science Engineering, Volume-3, Issue-12, December-2017, ISSN-2456-1843

Published

December 2017

Projects

AI for Human Centric Security

The University of Waikato

- The AI for Human-Centric Security is a Catalyst project funded by MBIE, New Zealand. The project aims to use AI to aid human security experts in managing cyber security-related configurations in diverse computer environments.

PhD Project

April 2022 - Current

Cryptographically Secure On-Line Identity System

Lancaster University

- Funded by Quantum Base and The Royal Society, UK, this project developed a framework leveraging quantum computer-generated identities for device authentication and validation, targeting resource-constrained devices like IoT and mobile applications.

Masters Thesis

June 2020 - September 2020

Secure communication using IPFS with IoT

Amrita Vishwa Vidyapeetham

- Funded by Amrita Vishwa Vidyapeetham, this project utilized the Interplanetary File System (IPFS) web3 protocol for secure, direct communication between users and IoT devices, eliminating the need for third-party vendors.

Under Graduate Thesis

June 2018 - April 2019

Crop Prediction System using Machine Learning algorithm

Amrita Vishwa Vidyapeetham

- Funded by Amrita Vishwa Vidyapeetham, this project developed a K-Means-based Crop Prediction System to provide farmers with recommendations based on soil type, location, and sowing time.

Industry Project

June 2017 - December 2017

Voluntary Activities

New Zealand Cyber Security Challenge

cybersecuritychallenge.org.nz

- Organized and facilitated Capture The Flag (CTF) events for the New Zealand Cyber Security Challenge, engaging over 500 participants, including high school students, university students, and industry professionals, to enhance their cybersecurity skills and awareness.

2022, 2023 & 2024

E-Hack Workshop

GITAM University, Bengaluru, India

- Organized and delivered a one-day seminar titled 'E-Hack,' focusing on ethical hacking and cybersecurity awareness for students.

March 19, 2016

Cyber Security Workshop

Amrita School of Engineering, India

- Organized and led a two-day workshop on Ethical Hacking and Cyber Security at Amrita School of Engineering, India, aimed at inspiring students from underprivileged backgrounds to explore opportunities in cybersecurity.

February 2016

Interests

Travel	Passionate about traveling and exploring diverse cultures & learning about history, which has broadened my perspective and enriched my understanding of the world.
Video Games	Enthusiastic about gaming, particularly exploring immersive stories and unique experiences that games offer.
Swimming	Avid professional swimmer since the age of 10, fascinated by underwater exploration and challenges requiring breath control.
Hack The Box	Active participant in Hack The Box challenges, honing penetration testing, problem-solving, and cybersecurity skills.