

# Swathi C G

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## EDUCATION

<b>PES University, Bengaluru</b> Bachelor of Technology in Computer Science and Engineering	2022-2026 GPA: 7.69/10.00
<b>Narayana PU College, Bengaluru</b> Pre-University Education (PUC)	2020-2022 Percentage: 88.83%
<b>Gopalan National School, Bengaluru</b> ICSE	2020 Percentage: 91.90%

## EXPERIENCE

<b>Center for Computer Networks and Cyber Security (CCNCS), PES University</b> <i>Research Intern</i> <ul style="list-style-type: none"><li>Worked on a blockchain research project titled "A Secure method of transferring confidential documents by leveraging Zero Trust Principles and Blockchain Technology".</li><li>Presented research at IEEE's ICTBIG2023.</li><li>Strengthened implementation skills with Hyperledger/Ethereum and MFA protocols</li></ul>	Bengaluru, India June 2024 – July 2024
<b>Consortium of Electronic Industries of Karnataka (CLIK)</b> <i>Software Intern</i> <ul style="list-style-type: none"><li>Contributed to the successful execution of CLIKTRONIKA 2025, a major industry event.</li><li>Managed database for CLIKTRONIKA 2025, ensuring efficient data handling, integration, and system performance.</li><li>Strengthened communication, teamwork, and organizational skills through hands-on experience.</li></ul>	Bengaluru, India Jan 2025 – Feb 2025
<b>PES University</b> <i>Teaching Assistant - Mathematics for Computer Science Engineers</i> <ul style="list-style-type: none"><li>Designed and facilitated experiential learning labs (Web Scraping, Data Cleaning, Visualization, Normal Probability Plots, Confidence Intervals, Hypothesis Testing, Regression, Optimization) to help students connect theory with real-world data applications.</li></ul>	Bengaluru, India Jun 2025 – Present

## PROJECTS

<b>A Secure method of transferring confidential documents by leveraging Zero Trust Principles and Blockchain Technology</b> <ul style="list-style-type: none"><li>Designed a secure document transfer system leveraging Zero Trust principles for strict access control and Blockchain technology for tamper-proof integrity and auditability.</li><li>Utilized Hyperledger/Ethereum for immutable, tamper-proof transaction records ensuring document integrity.</li><li>Enforced strict authentication (MFA) and least privilege access to prevent unauthorized document access.</li></ul>
<b>Design and Development of an FPGA-based Quantum Cryptography Protocol for Secure Communication</b> <ul style="list-style-type: none"><li>Designed and implemented a Quantum Key Distribution (QKD) protocol on FPGA for real-time secure key generation.</li><li>Combining BB84 QKD with Post-Quantum Cryptography (PQC) for enhanced security against quantum attacks.</li><li>Utilizing FPGA for high-speed computation, low latency, and efficient resource utilization in secure communication systems.</li></ul>

## TECHNICAL SKILLS

**Languages:** Python (Proficient), Java (Intermediate), C (Intermediate), Golang (Beginner), JavaScript (Intermediate)  
**Web/Frameworks:** ReactJS, Spring Boot  
**DevOps:** CI/CD, Docker, Kubernetes  
**Tools:** Git, Linux, Jira  
**Cloud:** Microsoft Azure, Google Cloud Platform (GCP).  
**ML/AI:** PyTorch, TensorFlow, pandas, numpy, Keras  
**Core CS:** Data Structures, Algorithms, Software Design, OOP, Applied Cryptography, Computer Network Security, Blockchain, Robotics

## CERTIFICATIONS

- Microsoft Certified: Azure AI Fundamentals

## PUBLICATIONS

[1] A Secure method of transferring confidential documents by leveraging Zero Trust Principles and Blockchain Technology

## ACHIEVEMENTS

- Attended the ACM summer school 2025 on Quantum Circuits and Quantum Algorithms hosted at JUIT, Solan.
- Participated in college-level hackathons, idea-thons, and tech workshops.

## SOCIAL SKILLS

**Team Collaboration:** Contributed effectively to team-based projects and events through coordination and collective problem-solving.  
**Communication:** Demonstrated strong verbal and written communication skills across professional, academic, and volunteer settings.  
**Open-mindedness:** Embraced diverse perspectives and adapted to varied roles, encouraging inclusive and flexible teamwork.  
**Presentation Skills:** Confident in delivering clear and engaging presentations in both academic and professional environments.