Aswin M Guptha

🌐 bitsbyamg.com • 🐙 aswinmguptha • in aswinmguptha

Summary

Lead Application Security Engineer with 8+ years of experience in security review and testing of web, API, and mobile applications. Proven expertise in threat modeling, architecture assessments, and embedding security into developer workflows while leading automation efforts to reduce detection and remediation cycles. Recognized speaker at BlackHat and other international conferences, with multiple CVEs and open-source contributions demonstrating technical leadership. Experienced mentor and community leader, having built large-scale AppSec talent pipelines through training programs and direct mentorship.

Experience

Lead Security Engineer

Traboda Cyberlabs *2021–Present*

- Led application security initiatives for web, API, and mobile products, embedding security testing and controls into the SDLC and aligning practices with OWASP ASVS, SAMM, and NIST standards, improving overall security posture.
- Conducted secure code reviews and vulnerability assessments (VAPT) across Node.js, Python/Django, PHP, and Java applications, identifying and mitigating high-impact vulnerabilities before deployment.
- Designed and implemented automated AppSec pipelines (Semgrep, CodeQL, SCA, DAST) integrated into CI/CD, accelerating vulnerability detection from weeks to hours while enabling engineering teams to remediate efficiently.
- Collaborated with product and engineering leadership to define secure coding guidelines, API security standards, and microservice architecture review checklists, ensuring security was integrated into design decisions.
- Delivered hands-on secure coding workshops and reusable labs (covering OWASP Top 10, API flaws, and business logic issues) adopted across engineering teams, raising developer security maturity and speeding up remediation cycles.
- Acted as a trusted security advisor to senior stakeholders, influencing product roadmaps, guiding risk prioritization, and ensuring releases met business and compliance requirements while maintaining technical rigor.

Senior Researcher

Amrita Center for Cybersecurity Systems and Networks *2019–2021*

- Designed and delivered advanced secure coding labs and simulation environments replicating real-world attack scenarios (OWASP Top 10, API flaws, mobile vulnerabilities), which were later adopted into the academic curriculum and enterprise training programs.
- Built a structured training program on secure REST API design and development, enabling over 300 professionals and students to master authentication, authorization, and API exploitation patterns; the program became the foundation for Amrita's industry outreach initiatives.
- Developed and integrated cybersecurity modules for courses on Modern Web Exploitation and Vulnerability Assessment & Penetration Testing, directly improving participant performance in national and international CTF competitions.
- Collaborated with faculty and industry partners to align training content with emerging threats and secure SDLC practices, ensuring graduates were industry-ready and aligned with enterprise security expectations.
- Acted as a bridge between academia and industry by embedding practical security practices into curricula, strengthening the employability pipeline for future security engineers.

Mentor

Team bi0s *2019–Present*

- Mentored India's top-ranked Capture The Flag (CTF) team in web and application security, guiding students to podium finishes at prestigious international competitions.
- Developed advanced training modules on web exploitation, and API security, enabling over 20 mentees to transition into professional AppSec roles and publish CVEs/research at global conferences.
- Established a structured mentorship framework with systematic review sessions, post-competition debriefs, and collaborative research write-ups, fostering a research-driven culture that gained recognition in the global security community.
- Provided ongoing guidance on vulnerability research and disclosure processes, helping mentees responsibly publish vulnerabilities and contribute to open-source security initiatives.
- Contributed to building a long-term talent pipeline by enabling students to transition from CTF researchers into enterprise-ready security engineers and consultants.

Security Researcher
Team bi0s   *2015–2019*

- Conducted hands-on vulnerability research in web, API, and mobile applications, discovering and responsibly disclosing critical flaws in widely used open-source platforms, resulting in multiple CVEs.
- Built custom automation scripts and frameworks to identify authentication bypasses, chained logic flaws, and complex vulnerability patterns, accelerating the team's problem-solving capabilities.
- Secured top rankings at international Capture The Flag (CTF) competitions, gaining deep expertise in exploit development, secure code review, and adversarial thinking that formed the foundation for later professional AppSec work.
- Collaborated across disciplines (pwn, RE, forensics) to broaden technical scope and strengthen the team's global ranking, reinforcing skills in cross-domain security problem solving.

Organizer
InCTF, InCTF Junior, Cyber Gurukulam   *2015–Present*

- Spearheaded India's first national-level Capture The Flag (InCTF, InCTFj) initiatives and the CyberGurukulam workshop, introducing 10,000+ students to practical cybersecurity through hands-on challenges, bootcamps, and structured learning tracks.
- Designed beginner-to-advanced challenges in web, API, and mobile security that accelerated participants' learning curve, enabling many to transition into successful security careers.
- Built collaborations with academia, government, and industry to scale these initiatives into flagship cybersecurity programs, creating one of the country's strongest talent pipelines with alumni moving into leading industry and research roles.

CVEs

- CVE-2025-20240 - Cisco - Medium - Cross-site Scripting
- CVE-2019-19902 - BackdropCMS - Critical - Remote Code Execution
- CVE-2019-16725 - Joomla! - Medium – Cross-site Scripting

Talks & Workshops

- Speaker, Blackhat Europe, 2023
- Speaker, Blackhat Middle East Africa, 2023
- Trainer, C0C0N International Cybersecurity Conference, 2023
- Trainer, Amrita Certified VAPT Wizard, 2022
- Speaker, CysInfo Cyber Meet 2016
- Co-trainer, International Summer School on Information Security and Protection 2016

Skills & Abilities

- **Application Security Leadership:** Driving secure SDLC adoption, defining API security standards, advising engineering leadership, and aligning practices with OWASP ASVS, SAMM, and NIST.
- **Secure Code Review:** Deep expertise in reviewing large-scale applications in Python, Node.js, PHP, Java; strong focus on identifying business logic flaws and complex attack chains.
- **Threat Modeling & Risk Analysis:** Applying STRIDE, attack surface mapping, and architecture reviews to proactively identify design-level weaknesses.
- **Automation & Tooling:** Building and integrating security automation in CI/CD with Semgrep, CodeQL, SCA, DAST; improving detection-to-remediation timelines.
- **Offensive Security Expertise:** Advanced skills in vulnerability research, exploit development, and adversarial testing, with multiple CVEs published in widely used platforms.
- **Developer Enablement & Training:** Designing and delivering secure coding workshops, reusable labs, and custom challenges that improve developer security maturity and remediation capability.
- **Frameworks & Standards:** OWASP Top 10, API Security Top 10, MASVS, MITRE ATT&CK, CVSS scoring, and compliance-aligned security practices.

Education

Master of Business Administration in IT & FinTech
Manipal University

Bachelor of Technology in Computer Science Engineering
Amrita Vishwa Vidyapeetham