Amritpal Singh Kaur

Software Support Specialist | MSc Advanced Computer Science (Merit)

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PROFESSIONAL SUMMARY

MSc Advanced Computer Science graduate (Queen Mary University of London, 2026, Merit), currently an Onsite Software Support Specialist at Brock Solutions, Heathrow Airport, supporting real-time baggage operations across a multi-terminal enterprise network. Proficient in Python, JavaScript/TypeScript, AWS, Docker, and CI/CD pipelines, with a strong track record in security-hardened deployments, AI-integrated full-stack development, and formal software verification.

EDUCATION

MSc Advanced Computer Science - Queen Mary University of London 2025 - 2026

Merit (Completed) | Cloud Architecture, Machine Learning, Security & Authentication, Distributed Systems, Data Analytics, Research Project

- **MSc Research Project - Lightweight Software Verification Tool:** designed and implemented a CTL model checker in Python achieving 34/34 test cases passing, covering Kripke structure parsing, temporal logic evaluation, and automated counterexample generation.

BSc (Hons) Computer Science, 2:1 - Staffordshire University 2022 - 2025

Full-Stack Development, Cloud Computing, AI, Cybersecurity, Mobile Development, Databases, Networking, UX Design

PROFESSIONAL EXPERIENCE

Onsite Software Support Specialist - Brock Solutions Apr 2026 - Present

Heathrow Airport, London

- Support SmartSuite, a real-time baggage operations platform used by major airlines, across a multi-terminal network of workstations, scanners, and peripherals.
- Troubleshoot software bugs, application deficiencies, and performance issues for mission-critical baggage handling systems (BHS) supporting 24/7 Heathrow operations.
- Investigate and resolve incidents by reviewing system and application logs and analysing SQL baggage database (BODB) records, applying targeted fixes to restore service with minimal passenger disruption.
- Serve as first point of contact for technical incidents, triaging by business impact and keeping critical systems within tight SLAs and low mean-time-to-resolution.
- Perform root cause analysis on recurring faults, implement permanent fixes, and create runbooks, knowledge articles, and diagnostic scripts to reduce repeat incidents and accelerate resolution.
- Support enterprise infrastructure including Windows Server, SQL databases, Azure cloud, and industrial automation interfaces aligned with IATA Resolution 753 compliance.

Customer Success & International Delivery

Monthly service reviews | Incident follow-up | Customer relationship management | On-site training in Spanish

Customer Success Manager - Airline Account

- Serve as Customer Success Manager for the airline account, running monthly service reviews to confirm service performance and review the previous month's incidents and open problems.
- Track agreed actions through to resolution, manage escalations, and act as the main point of contact between the airline and the technical/support team.
- Build strong customer relationships and ensure the customer feels supported, informed, and confident in the service.

International Product Training - Mexico & Spain

- Travelled on-site to Mexico and Spain to train airline and airport staff on the system, delivering training in Spanish.
- Answered user questions and concerns directly, adapting explanations to different levels of technical knowledge.
- Acted as the on-the-ground point of contact during rollouts, helping local teams adopt the system confidently.

IT Support Engineer (Deployment / Break-Fix) - Manpower (Zoom IT) Apr 2022 - Apr 2026

Enterprise field placements at Bank of America, Amadeus, and ENI, London, UK

- Supported 100+ end users and resolved complex hardware/software incidents across enterprise desktop systems at Bank of America, Amadeus, and ENI, minimising downtime in regulated FinTech, travel technology, and energy environments.
- Led large-scale deployment initiatives at Bank of America, completing 500+ device rollouts and asset management programmes, and delivered secure laptop/mobile device replacements with enterprise application installs for Amadeus.
- Provided Level 2 escalation support at Amadeus and assisted in a full Windows 11 migration across ENI's energy infrastructure, reducing mean time to resolution and maintaining 99.9% uptime.
- Implemented security patches, system hardening, and OS updates aligned with FinTech, GDPR, and financial industry requirements, while maintaining structured technical documentation and a team knowledge base.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript (ES6+), TypeScript, C# (.NET), HTML5, CSS3
Frameworks & Libraries: React, Next.js, Node.js, Express.js, Scikit-learn, NumPy, Pandas, Matplotlib
Cloud & DevOps: AWS (EC2, S3, Lambda, IAM, CloudWatch), Azure (Azure AD, Intune), Docker, Kubernetes, CI/CD, Git, Vercel, Linux/Unix, Windows Server, Active Directory
Support & Operations: Incident Management, Root Cause Analysis, Log Analysis, SQL Diagnostics, SLA Management, SmartSuite / BHS, Multi-terminal Networks, IATA Resolution 753
Security: AES-256 Encryption, JWT Auth, OAuth, IAM, CVE Analysis, Network Security, Secure Design Patterns, FinTech/GDPR Compliance
Databases: SQL, MySQL, PostgreSQL, SQLite, SQL Server, MongoDB, Query Optimisation, ER Modelling
AI & Data: Machine Learning, NLP, Statistical Analysis, Predictive Modelling, Data Visualisation, Model Evaluation
Methodologies & Tools: Agile/Scrum, RESTful API Design, OOP, Functional Programming, Formal Verification, JIRA, Figma, Postman

KEY PROJECTS

- **CTL Model Checker (Lightweight Verifier):** Pure-Python CTL model checker with Kripke structure support, 34/34 tests passing, counterexample generation, and lasso detection. Completed as MSc research project.
  Tech: *Python, CTL, Formal Verification, Algorithms | github.com/Amrit004/Lightweight-Software-Verification-Tool*
- **SOC Command Center:** Enterprise security operations dashboard with real-time threat detection, an interactive world attack map, incident response workflows, and GDPR/SOC2/ISO27001 compliance tracking. AI-powered severity scoring over a live WebSocket attack feed.
  Tech: *Next.js, WebSocket, AI Analysis, Compliance | github.com/Amrit004/soc-command-center*
- **CipherOS, Cryptography Toolkit:** Client-side browser toolkit implementing AES-256-GCM encryption, SHA-3/MD5 hashing, JWT decoding, and password strength analysis via the Web Crypto API, with a zero-knowledge architecture.
  Tech: *JavaScript, Web Crypto API, AES-256-GCM | github.com/Amrit004/CipherOS*

LANGUAGES

English (Native) | Spanish (Native) | Catalan (Native) | Punjabi (Native) | Hindi (Professional)