

# Michael McKibbin

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## Professional Summary

Software Engineer with strong experience designing and building reliable backend systems, cloud-deployed applications, and full-stack web solutions. Background spans Java-based backend development, RESTful API design, automated testing, CI/CD pipelines, and AWS cloud infrastructure. Known for a practical, systems-oriented approach shaped by real-world IT and engineering experience. Comfortable working across development, deployment, and production support, with a focus on clean architecture, maintainability, and continuous improvement. Able to contribute effectively in collaborative Agile teams while taking ownership of complex technical problems.

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## Core Skills

### Software Engineering & Backend

- Java (17/21), object-oriented design, data structures & algorithms
- REST API design, modular architectures, validation & parsing pipelines
- Automated testing with JUnit 5, JaCoCo, test-driven practices
- Performance optimisation, debugging, and fault analysis

### Web & Full-Stack Development

- JavaScript / TypeScript, Node.js
- React, Next.js (SSR / SSG), Tailwind CSS
- Frontend–backend integration, authentication flows, JSON handling

### Cloud, DevOps & Delivery

- AWS: EC2, S3, IAM, CloudWatch
- CI/CD pipelines using GitHub Actions and Maven
- Docker fundamentals, automated builds and deployments

### Systems, Security & Operations

- Linux (Ubuntu, Kali), Windows Server
- Logging, monitoring, diagnostics, secure configuration
- Networking fundamentals: TCP/IP, firewalls, VPNs

### Tooling & Collaboration

- Git, GitHub, PR workflows, code reviews
  - Jira, Agile / Scrum practices
  - IntelliJ IDEA, Visual Studio Code
  - Technical documentation and knowledge sharing
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## Education

### BSc (Hons) in Contemporary Software Development (Part-time, online – flexible schedule)

Atlantic Technological University (ATU) • Expected graduation – May 2026

Modules Include: Software Development, DevOps Pipelines, Cross-Platform Development, Software Engineering Practices, Independent Final Project.

### BSc in Computer Science (Computer Forensics and Security)

South East Technological University (SETU) • June 2025

Key areas: Software Development, Data Structures, Cryptography, Secure Programming, Cloud Fundamentals, Databases (SQL & NoSQL)

## Certifications & Training

- AWS Cloud Practitioner
  - Oracle OCA: Java SE Programmer
  - CompTIA Security+
  - CompTIA Network+
  - Cisco CCENT
  - Cisco: Introduction to Cybersecurity
  - Currently training: Cisco Endpoint Security
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## Selected Projects

### CSV Data Processor — Java, Maven, CI/CD

A modular, RFC-4180-compliant CSV parsing and validation framework designed for correctness and resilience.

- Designed extensible parsing architecture with configurable dialects and schema validation
- Implemented robust edge-case handling (multi-line quoting, BOM detection)
- Delivered extensive automated test coverage enforced via GitHub Actions and JaCoCo
- Worked within a structured Git workflow using PRs, reviews, and CI quality gates

### PuzzlePaddy.com — Full-Stack Web Application

Production-hosted puzzle and game platform built with Next.js, Node.js, and TypeScript.

- Implemented server-side rendering and custom API routes
- Built automated CI/CD deployment workflows
- Focused on performance, maintainable UI components, and clean integration

### DevOps Cloud Automation — AWS

Automated provisioning and deployment of cloud infrastructure using scripting and AWS services.

- Created EC2 instances, S3 static hosting, and CloudWatch monitoring
- Automated setup, configuration, and logging via Python (Boto3), Bash, and PowerShell
- Applied secure IAM practices and monitoring principles

### Vienna U-Bahn Route Planner — JavaFX

Desktop application implementing BFS, DFS, and Dijkstra's algorithm for transit routing.

- Built an internal graph model of the transit network
- Optimised route calculations and UI performance

### Image Analysis Tool — JavaFX

Java-based image analysis tool using custom data structures.

- Detected and classified blood cells from scanned slides
  - Focused on memory management and performance optimisation
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## Professional Experience

- **Self-Employed IT Specialist — Ireland (2009–2021)**  
Provided on-site and remote IT support for individuals and SMEs. Managed systems setup, troubleshooting, refurbishment, documentation, and customer support.
  - **Field Engineer — The Tech Guys (Dixons / Currys / PC World) (2007–2009)**  
Installed and maintained POS and stock control systems across multiple retail locations. Delivered software upgrades, diagnostics, and technical support.
  - **IT Refurbishment & Support — Bits and PCs Ltd (2002–2007)**  
Refurbished and supported IT systems for retail and SME clients, including network setup and data recovery.
  - **Telecoms & Field Service Technician Roles — Ireland & USA (1988–2002)**  
Installed and maintained PBX systems, structured cabling, and telecom infrastructure, including team leadership roles on large projects.
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## Additional Skills

- Excellent communicator — documentation, repo governance, PR reviews
  - Experience mentoring teammates in Git workflows
  - Strong problem solver with debugging, refactoring & optimisation skills
  - Passion for learning new technologies
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## Achievements & Interests

- Sun Life / AWS Capture the Flag (2023) — 2nd Place
  - Member: Mensa, Irish Computer Society
  - Proofreader for Project Gutenberg
  - Interests: cloud labs, vintage computing, Raspberry Pi, cybersecurity, data forensics, logic puzzles, strategy games.
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