John Gambino

Computing Student | Agentic Software Engineering, Software Development & IT

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BSc Computing student at Birkbeck, University of London, averaging 80–90% and on track for a First, with experience across software development, computer systems and networking. Builds working software by directing AI coding agents, and connects his own apps to AI assistants through the Model Context Protocol (MCP). Final-year project researches routing queries between local and cloud LLMs. Brings several years of professional experience in fast-paced operational environments, and is looking for an entry-level technical role, ideally in agentic software engineering.

TECHNICAL SKILLS

AI & Agentic Engineering: Claude Code, OpenAI Codex, Model Context Protocol (MCP) servers and connectors, agent tool design and permission gating, LLM query routing (local vs cloud models)

Programming: Python, Java, C#, JavaScript, PHP, Lua, C++

Web & Desktop: HTML, CSS, React.js, JSX, JSON, Electron, WPF (.NET)

Databases: SQL, MySQL

Systems & Networking: Microsoft Azure, Active Directory Domain Services, Group Policy, Microsoft Entra ID, IAM, RBAC, Azure networking (VNets, NSGs, Firewall), Azure Monitor, Microsoft Defender for Cloud, TCP/IP, Network Configuration & Troubleshooting, Windows, PowerShell

Tools & Platforms: Visual Studio, Visual Studio Code, IntelliJ IDEA, XAMPP, Apache HTTP Server, MySQL Workbench, Microsoft 365, Google Workspace, Google Apps Script, Git, GitHub, Gradle, Minecraft Forge, Blockbench

EDUCATION

Birkbeck, University of London

BSc Computing with Foundation Year, 2024 - 2027 (Expected)
Degree studied flexibly alongside employment; available for full-time work from January 2027.

Current average: 80–90% (on track for a First-Class degree)

Relevant modules: Software Engineering, Computer Networking, Data Structures & Algorithms, Computer Organisation & Systems Software, Systems Analysis & Design, Database Technology, Web Programming using PHP, Software & Programming, AI & Machine Learning, Cloud Computing

AI & AGENTIC ENGINEERING PROJECTS

Raccoon HQ, Arbiter Tracker and Vault were built by directing AI coding agents (OpenAI Codex, Claude Code): specifying features, reviewing and testing their output, and wiring the finished apps back into AI assistants through MCP.

Arbiter – Adaptive Multi-Model Orchestration (Final Year Project, in progress)

LLM routing || Local vs cloud models || Git/GitHub

- Researching and building a router that decides, per query, whether a local or a cloud LLM should answer, trading off cost against response quality.
- Grounding the design in published query-routing research, including Hybrid LLM (ICLR 2024) and RouteLLM, with structured notes on each paper.
- Written by hand rather than AI-generated, with versioned progress on GitHub using Conventional Commits.

Raccoon HQ – AI-Connected Academic Workspace

C# || WPF || .NET || MCP

- Desktop planner covering calendar, assignments, tasks, final-year-project milestones, research notes and lecture documents.
- Gave AI assistants access to the workspace through a custom MCP server, with write tools switched off unless explicitly enabled so agents can only read by default.
- Took the app through build, test and redesign cycles with Codex and then Claude Code, including tracking down a serialisation bug that blocked every agent write.

Arbiter Tracker – Project Tracker with AI Connector
Electron || JavaScript || MCP

- Desktop app for logging project work items, research and activity, and exporting weekly supervisor progress reports as PDF.
- MCP connector lets AI assistants read the project and add updates, but is append-only by design so an agent can never rewrite or delete history.
- Links research entries to paper notes in Raccoon HQ through a second, read-only connector; notes only appear in reports once the item is marked Done.

Vault – Encrypted Desktop Password Manager
C# || WPF || .NET Framework || Cryptography

- Encrypts all data with AES-256 using a key derived from the master password (PBKDF2-SHA256, 600,000 iterations), with an HMAC check to detect tampering or a wrong password.
- Stores everything locally with a backup on every save; includes a secure random password generator, strength meter, 20-second clipboard clearing and 5-minute auto-lock.

Paper Den – Template-Based PDF Writer
Desktop application || PDF generation

- Desktop app for writing documents, choosing from a set of templates and exporting them as finished PDFs, with work saved in its own .paperden project format.

OTHER PROJECTS & DEVELOPMENT

Comfy Capy Calories – Full-stack Nutrition Web App (live, Aug 2026 – present)
C# || ASP.NET Core || Razor Pages || EF Core || SQLite || ASP.NET Core Identity || React || Azure (Linux) || Caddy || Cloudflare

- Full-stack nutrition tracker grown from a showcase project into a commercial brand: secure accounts, personalised calorie targets, meal logging, custom foods and USDA FoodData Central search through React.
- Built the core architecture by hand (data model, authentication, food management and diary) with EF Core and ASP.NET Core Identity, then moved to agentic development as the scope grew.
- Runs production on an Azure Linux VM with Caddy for reverse proxying and HTTPS and Cloudflare for DNS, using a release process with database migrations, backups, automated testing, production smoke checks and rollback.

Minecraft Mod & Resource Pack Development — Personal Projects
JSON || Blockbench || Forge || Gradle

- Built and published 7 projects for a Minecraft railway simulation mod (JSON configurations, handmade textures and models, Forge/Gradle builds), reaching 16,000 combined downloads on Modrinth, with the most popular exceeding 7,900.

Web Application Development — University Coursework
PHP || SQL || MySQL || HTML || CSS || PDO

- Built database-driven PHP/MySQL web applications with PDO queries, form validation, session and cookie management, MVC architecture and single-entry-point routing.

PROFESSIONAL EXPERIENCE

Crawfords of London — Operations Coordinator
December 2022 – October 2023

- Coordinated overnight transport operations, in constant contact with a fleet of drivers and responding to changes in flight schedules, passenger numbers and special requirements.
- Primary out-of-hours contact for passengers and drivers, resolving issues and escalating where necessary.
- Used internal operational software and live data to create reports, maintain records and support daily operations.

CMAC Group — Operations Controller
March 2019 – May 2022

- Coordinated planned and emergency transport and accommodation across the UK and ROI, including time-critical rail replacement, flight disruption and medical transport operations.
- Coordinated transport and accommodation for Afghan refugees arriving in the UK, maintaining security and confidentiality requirements.
- Trained new staff on internal systems and quickly became proficient with newly implemented web-based platforms, helping colleagues learn new workflows.

CREDENTIALS AND CERTIFICATIONS

Microsoft Applied Skills: Identities & access with Microsoft Entra, Administer AD DS, Azure management tasks, Cloud security & monitoring, Secure workload access with Azure networking || **Simplilearn:** ReactJS for Beginners