

ABHISHEK DAN

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CAREER SUMMARY

Computer Science graduate with real-world experience spanning application development (Python, Java, Flask, Pycord), live-service systems administration (Ubuntu, Docker, 26-container self-hosted stack, Cloudflare Zero Trust, Tailscale), and enterprise networking (UniFi, Cisco VLANs, multi-WAN diagnosis). Track record of zero-downtime infrastructure changes, AV deployments, and Tier-1/2 support for live production environments. Currently developing AI-assisted educational content with the Ministry of Education.

WORK EXPERIENCE

AI Content Development Assistant

January 2026 – Present

Ministry of Education, Trinidad & Tobago

- Produce step-by-step instructional video content walking students through worked problem solutions for national primary, secondary, and advanced-level examinations.
- Develop original practice questions and exercises aligned to the national curriculum at each examination level, using exclusively non-copyrighted source material.
- Organize and package supporting educational materials — explanatory PDFs paired with accompanying demonstration videos — for structured distribution to students.
- Source and structure original curriculum-aligned content for lesson plans and teaching structures, producing self-contained learning resources covering each target topic.
- Contribute to the ongoing testing, iteration, and refinement of internal AI-assisted educational tooling used within the educational delivery workflow.
- Support the development of additional original educational resources and interactive, topic-specific learning experiences for student application of curriculum knowledge.

Independent IT Consultant & Systems Administrator

June 2022 – Present

Private Clients & Self-Directed Operations, Trinidad & Tobago

- Design, deploy, and operate a production self-hosted infrastructure environment on Ubuntu 24.04 LTS running 26 Docker containers via a single Docker Compose stack — delivering live services including media streaming (Jellyfin, Sonarr, Radarr, Prowlarr, Jellyseerr, qBittorrent), self-hosted photo library (Immich, ~28 GB), document management (Paperless-ngx with Gotenberg, Tika, Postgres, Redis), cloud storage (Nextcloud/MariaDB), and productivity tooling (Stirling PDF, MeTube, Glance).
- Architect secure external access using Cloudflare Zero Trust Tunnel against registered domains, with wildcard CNAME routing and Cloudflare Access authentication (email OTP + fingerprint) enabling zero-touch subdomain provisioning for new services.
- Administer remote LAN access via Tailscale VPN and network-wide DNS filtering via AdGuard Home on a macvlan interface (configured for real client-IP visibility), with split-DNS routing for internal service resolution.
- Operate Home Assistant (host network) integrated with Broadlink IR, LocalTuya, SmartIR, HACS, and Alexa Media Player to run a live smart-home environment across lighting, AC, TV, and voice automation.
- Orchestrate infrastructure changes using AI-driven automation: Claude Code (agentic CLI) deployed over SSH for planning, executing, and documenting operational changes; paired with Ruflo MCP v3.5.42 for structured health checks, Docker inspection, and cross-session state tracking.

- Implement automated nightly backups via Restic (03:00 UTC) covering configuration, database dumps (Immich Postgres, Nextcloud MariaDB, Paperless Postgres), and application state.
- Author custom shell scripts for operational observability — including CPU thermal monitoring with push notifications and backup orchestration.
- Maintain systematic infrastructure documentation via structured 22-section server state files generated after every major change, indexed for searchability.
- Diagnose and resolve live-service incidents including authentication failures across automation chains and thermal throttling during H.265 transcoding workloads (tuned CRF presets and CPU limits after observing sustained 81 °C under Tdarr).
- Conduct ongoing security audits covering exposed ports, Docker socket exposure, and SSH hardening.
- Manage full service lifecycle — commissioning, operation, and clean deprovisioning (data cleanup, image pruning, secret revocation, tunnel deregistration).
- Provide ongoing technology advisory, hardware/software troubleshooting, custom PC builds and upgrades, and smart-home deployment to private clients across Trinidad & Tobago.

Independent IT Consultant

March 2025 – January 2026

Contract Engagement, Trinidad & Tobago

- Contracted IT Consultant serving a Caribbean organization with twin on-site locations and online operations — supporting office staff, management, facilities personnel, presenters, and on-site users across up to 7 concurrent sessions on peak days.
- Performed daily system health checks across UniFi wireless controllers, Cisco routers and switches, and Microsoft 365 tenants — sustaining 99.9% uptime on live production services used throughout active working hours.
- Managed UniFi wireless infrastructure, Cisco switch and router configuration, and physical cable tracing using Ethernet testers with remote-identifier modules to locate and verify live drops across both buildings.
- Executed a live-cutover switch replacement when a Dell 48-port PoE switch failed: deployed a Cisco Catalyst 3560-V2 PoE-24, reconfigured all VLANs, applied the existing Cisco IOS configuration, and accurately remapped 24 active uplinks — achieving full service continuity with minimal user downtime.
- Diagnosed packet loss on one of the site's two ISP uplinks by running traceroute and continuous ping tests to speedtest.net, identifying a 4-reply / 4-timeout pattern and isolating a missing upstream hop at 63.245.74.87; documented the broken route, alerted the ISP, and directed the fix — with users unaffected because the secondary uplink kept live services online via UniFi multi-WAN load balancing.
- Resolved a persistent workstation NIC failure (network adapter dropping internet after every reboot) by removing faulty drivers and triggering Windows auto-reinstall of the device, restoring stable connectivity without hardware replacement.
- Installed and maintained AV equipment across on-site spaces: projectors, smart TVs, wireless-HDMI presentation systems, sound reinforcement, and cable management.
- Provided on-site coverage for live high-stakes on-screen sessions — scheduling Windows and software updates around active windows and staying on-site to ensure no interruptions during live sessions.
- Deployed fresh Windows images across shared workstation rooms and managed ongoing OS deployment, feature updates, security patching, and hardware maintenance.
- Administered the organization's Zoom environment: scheduled sessions, provisioned presenter accounts, managed breakout rooms, and troubleshoot mid-session issues.
- Designed and deployed smart-space automation using SmartLife and Alexa — controlling lighting, AC, smart TVs, and smart blinds across office and shared work areas.
- Built an SQL-driven database to log, monitor, and report on on-site cleaning schedules and cleaning-supply reorders — streamlining facilities operations.

- Triaged Tier-1 tickets and handled Tier-2 escalations involving complex network diagnostics, system restores, and vendor coordination.
- Coordinated multi-vendor engagements across AC servicing firms, construction contractors, and three separate telecom/ISP providers — managing contractor payment disbursement and resolving cross-provider escalations.

IT Consultant & Graphic Designer

June 2022 – November 2024

Abhishek's Copy & Stationary Shop, Trinidad & Tobago

- Produced graphic design collateral for retail customers using Adobe Creative Suite (Photoshop, Illustrator, Premiere Pro, After Effects, Audition, Acrobat) — including call cards, posters, signage, flyers, and custom print materials.
- Delivered day-to-day IT support for shop operations, including internet and ISP troubleshooting, connectivity diagnostics, and vendor escalations across multiple service providers.
- Diagnosed and resolved PC hardware and software issues on shop workstations and customer machines, minimizing downtime during active business hours.
- Provided in-store customer technology advisory alongside printing and design services.

EDUCATION AND CERTIFICATION

- Bachelor of Science in Computer Science | University of the West Indies, St. Augustine 2025
- Graphic Design Certification | Synergy Training Institute 2024
- Office Excel 2016 | Microsoft Office Specialist 2020
- Office Word 2016 | Microsoft Office Specialist 2020
- Office PowerPoint 2016 | Microsoft Office Specialist 2020
- CAPE | Waterloo Secondary School, Trinidad 2020
- Singing (Grade 5) | Trinity College, London 2018
- Plectrum Guitar (Grade 3) | Trinity College, London 2018
- CSEC | San Fernando Secondary School, Trinidad 2017
- Theory of Music (Grade 5) | Trinity College, London 2016
- RBC Young Leaders | Certificate 2016

TECHNICAL PROJECTS

- Discord Bot Development | Python, Pycord
 - Developed a modular Discord bot with a plug-and-play architecture, allowing new commands to be added simply by placing Python files into a commands folder.
 - Implemented moderation tools, including ban, soft-ban, kick, mute, purge, timeout management, and announcements.
 - Designed automation such as welcome messages, chat-leveling system, and interactive user rank scoreboard.
 - Created fun commands like coin flip, dice roll, and rock-paper-scissors to enhance server engagement.
 - Developed a modular real-time scam link detection system in Python using Pycord, automatically deleting suspicious messages, issuing user timeouts, notifying users, and alerting moderators with actionable controls, enhancing server security while maintaining moderator oversight.
- Weathery – Real-Time Weather Web App
 - Python, Flask, HTML, CSS, Jinja2, OpenWeatherMap API
 - Developed a responsive web application that provides real-time weather data for any city worldwide.
 - Implemented dynamic weather information including current conditions, temperature (Celsius & Fahrenheit), feels-like temperature, pressure, humidity with progress bar, and precipitation.
 - Designed a modern liquid glass UI with glass-effect cards for location, weather info, and humidity/precipitation.

- Integrated OpenWeatherMap API to fetch live weather data with error handling for invalid inputs.
- Implemented Jinja2 templating for dynamic content rendering in Flask.
- Managed environment variables and API keys securely using .env and python-dotenv.
- Version-controlled with Git and GitHub, including a visually rich README with deployment instructions.
- Pokémon Dashboard | Python, Flask, PokeAPI
 - Built a Flask web application with server-side rendering that allows users to register, log in, and access a personalized dashboard upon authentication.
 - Designed the app to read from a local CSV database and dynamically fetch Pokémon images from the PokeAPI based on user interactions.
- Island Adventure RPG | Java, Eclipse IDE
 - Developed a 2D top-down adventure RPG with a custom game engine using Java, featuring 3rd-person movement, sprite animation, and interactive gameplay.
 - Implemented collision detection and hitboxes for both player and NPCs, ensuring smooth and realistic interactions.
 - Created basic NPC behavior with pseudo-random movement and text interactions, enhancing game immersion.
 - Designed an inventory system for item management, integrating events and sound cues to improve player feedback.
 - Incorporated custom fonts, event handling, and dynamic sprite animations to provide a polished visual and interactive experience.
- **Custom Inventory App:** Lightweight inventory tracker with role-based data entry forms.
- **Encryption/Decryption Tool:** Java GUI utility for secure file handling.
- See GitHub for more updates (<https://github.com/AbhishekAEDan>)

RELEVANT COURSEWORK

- Data Structures
- Programming Fundamentals
- Operating Systems
- Object-Oriented Programming
- Software Engineering
- Information Security Systems
- Web Programming and Technologies
- Fundamentals of LAN Technologies
- Fundamentals of WAN Technologies
- Cloud Computing

TECHNICAL SKILLS

- **Programming:** Python (Flask, Pycord, python-dotenv, Jinja2), Java, C++, C#, C, JavaScript, HTML/CSS, PHP, Node.js, R
- **Databases:** Oracle SQL, MySQL, MongoDB, PostgreSQL, MariaDB, Microsoft Access
- **Systems & Containers:** Ubuntu Linux, Docker, Docker Compose, Windows OS, Microsoft 365
- **Networking:** UniFi Controller, Cisco IOS, VLANs, LAN/WAN, multi-WAN, DNS, SSH, port-forwarding, Cat5 cabling
- **Cloud & Remote Access:** Cloudflare Zero Trust, Cloudflare Tunnel, Cloudflare Access, Tailscale, AdGuard
- **AI & Automation:** Claude Code (agentic CLI), Model Context Protocol (MCP), shell scripting, Home Assistant
- **Creative Suite:** Adobe Photoshop, Illustrator, Premiere Pro, After Effects, Audition, Acrobat
- **Game Development:** Godot, Unreal Engine 4 & 5, custom Java game engines
- **Developer Tooling:** Git, GitHub, VS Code, Visual Studio, Eclipse, R Studio, Oracle Live Server, VirtualBox

REFERENCES

- **Pt. Latchmidath Maharaj**
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