Andrew Dang

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Education

University of Texas at Arlington — Arlington, TX
B.S. in Computer Science, Minor in Business — *Expected May 2028*

- GPA: **3.84/4.0** | Dean's List | Maverick Academic Scholarship | Microsoft Cybersecurity Scholarship
- Coursework: Data Structures & Algorithms, Computer Organization, Software Engineering, Object-Oriented Programming

Experience

NTX Embedded — Carrollton, TX
Software Engineer Intern — *Aug. 2026 – Present*

- Built a reusable **Node.js** template with **Entra ID/PKCE**, Helm RBAC, audit logs, and health/KPI APIs.
- Built a KPI dashboard polling internal apps every **15 minutes**; added role-based views and **75 tests**.
- Implemented shared **Microsoft SSO/RBAC** for app permissions, delegated access, sessions, and audit trails.
- Standardized **115+ REST endpoints** and **41 PostgreSQL migrations**; automated tests and Windows releases.
- Improved engineering efficiency by **∼30%** with AI-assisted coding, testing, debugging, and documentation.

Visionet Systems (Microsoft Solutions Partner) — Cranbury, NJ
Software Engineer Intern — *June 2026 – Aug. 2026*

- Engineered workflow software for **10 enterprise use cases**, translating requirements into maintainable applications.
- Reviewed **1,000+ logs per workflow** at **90% confidence** to validate outputs and escalation behavior.
- Implemented a **5-stage pipeline** for request analysis, planning, execution, logging, and visualization.
- Built full-stack features with **Angular, Spring Boot, TypeScript, Java, PostgreSQL, and REST APIs**.
- Improved application observability with execution logs, summaries, and process status in **React Flow**.

Avallon — Remote
Software Engineer — *May 2026 – Oct 2026*

- Tested releases serving **5,000+ members** with functional, regression, integration, performance, and E2E tests.
- Reported reproducible defects with steps, logs, screenshots, and Jira tickets for engineering fixes.
- Tested **React, Next.js, Electron, Node.js, and TypeScript** across production web and desktop apps.

Projects

Klip — Instant Replay Recorder | ***C++, Python, Node.js, Next.js, TypeScript, WASAPI*** — Live Demo | GitHub

- Reached **1,000+ downloads** by building a Windows instant-replay recorder for games and displays at **30/60/120 FPS**.
- Delivered comparable capture performance in an application **5× smaller than OBS** using a lightweight native pipeline.
- Improved capture performance by **∼30% versus OBS** using Direct3D 11, WASAPI, FFmpeg, and NVENC/AMF.
- Built a low-latency replay pipeline combining GPU capture, system audio, hardware encoding, and circular buffering.

Project Lou — Autonomous Software Maintenance | ***Python, FastAPI, PostgreSQL, Docker, LLM Agents***

- Build an autonomous maintenance platform that detects and repairs runtime regressions across **10** repositories.
- Combine dependency graphs and runtime benchmarks to identify **24 regression types**, cutting diagnosis time by **60%**.
- Orchestrate LLM agents in isolated **Docker** sandboxes, achieving a **80% verified repair rate** through automated testing.

Open-Source Contributions | ***NVIDIA AIStore, Rust, Axios, htmldate*** — GitHub

- Contributed to **NVIDIA AIStore, Rust, Axios, and htmldate**; shipped **4 merged** and **10+ review-ready PRs**.

Leadership & Involvement

AWS Cloud Club | *President* — 2026 – Present

- Planned workshops in **Kubernetes** and **AWS cloud tools**, guiding members through deployment and cloud fundamentals.

Association for Computing Machinery (ACM) | *Project Manager* — 2026 – Present

- Mentor a **5–7-person team** building a computer-vision project using **Python** and modern **ML workflows**.

Research Interest Group | *Co-Leader* — 2026 – Present

- Connect and mentor an **8-person team** with faculty to build research readiness and prepare for research and internships.

Technical Skills

Languages: Python, TypeScript, JavaScript, Java, C++, C#, C, SQL, PowerShell, .NET
Frameworks & Testing: React, Next.js, Angular, Spring Boot, Node.js, FastAPI, Playwright
Databases: PostgreSQL, MySQL, MongoDB, SQLite
Cloud & DevOps: AWS, Docker, Kubernetes, Terraform, Git, GitHub Actions
Systems: Linux, Windows Server, Active Directory, Direct3D 11, FFmpeg
AI: OpenAI API, Claude API, RAG, LLM Agents