

VENKATA ADAPALA

Software Developer | Full-Stack Systems

(+1) 365-888-6606
avmsowmyanath8@gmail.com
aviansilk.github.io/portfolio

CANDIDATE SUMMARY:

Third-year Computer Science student with strong experience in full-stack development, backend systems, and cloud-based applications. Proficient in Java, Python, and JavaScript with AWS and Oracle certifications. Experienced in building, testing, and optimizing scalable applications, with a focus on writing clean, maintainable code and collaborating in team-based development environments. Seeking a Software Developer co-op where I can contribute to designing, developing, and enhancing production systems.

EDUCATION:

University of Toronto Mississauga

Honours Bachelor of Science (H.BSc.), Computer Science | September 2023 - Present

- Expected Graduation: May 2028 (Co-op Program)
- Emphasis on system design, OOP, and database-driven application development

TECHNICAL SKILLS:

- ✓ Languages: Java, Python, JavaScript, TypeScript, C, RiSC Assembly
- ✓ Frontend Dev: React, React Router, Next.js, HTML, CSS, Vanilla JavaScript
- ✓ Backend Dev and APIs: Node.js, Express, Flask, REST API design & development, JWT Authentication
- ✓ Cloud, DevOps & Deployment: Docker, Docker Compose, nginx, AWS (Certified Cloud Practitioner), CloudFront, GitHub Actions CI/CD
- ✓ Testing and Quality Assurance: Jest, jsdom, pg-mem, unit and integration testing, fake timers
- ✓ AI-assisted dev tools: Claude (system design prototyping, backend dev, testing workflows, CI/CD support), Google Gemini (PDF parsing and structured data extraction)
- ✓ Databases: PostgreSQL, SQLite
- ✓ Tools and Technologies: Git, Makefile, Vite, JavaFX, HLS.js, PyMuPDF, SMTP Integration
- ✓ Security and Code Analysis: Trivy, Semgrep, Gitleaks

EXPERIENCE:

FIRST Robotics Competition (FRC) - Team 5409

Member of the Programming Sub-team | September 2022 - April 2023

- As a high school student, developed Java-based software for a real-time control system integrating sensors, vision processing (Limelight), and hardware components
- Collaborated with a team of seven other developers to design, implement, and test system features across multiple development iterations
- Diagnosed and resolved system issues through live testing, improving reliability and performance under strict time constraints
- Regularly and effectively participated in code integration and validation
- Competed at the FRC World Championships, ranking within the **top 18 percent globally**

RELEVANT PROJECTS:

Radio Calico

Full-Stack Streaming Platform | April 2026 - Present

- Designed and developed a full-stack web application supporting live HLS audio streaming with real-time metadata, album art, song history, and user interaction features
- Leveraged Claude as a development partner across the entire lifecycle, including initial system architecture design, API structure, and data flow planning, which accelerated prototyping and reduced design iteration time
- Used Claude to design and refine PostgreSQL schemas, ensuring efficient data modeling for streaming metadata, user preferences, and historical records
- Implemented backend services using Node.js and Express, with Claude assisting in endpoint design, validation logic, and error handling strategies to improve code quality and maintainability
- Configured nginx and designed a multi-stage Docker architecture for development and production environments, with Claude guiding containerization strategy and deployment setup
- Developed comprehensive automated tests using Jest, jsdom, and in-memory PostgreSQL (pg-mem), with Claude generating test cases for API endpoints and asynchronous frontend behavior
- Integrated GitHub Actions CI/CD pipelines with automated testing and multi-layer security scanning (npm audit, Trivy, Semgrep, Gitleaks), with Claude assisting in workflow design and optimization
- Improved frontend performance through lazy loading, caching strategies, and asset optimization, with Claude contributing to implementation decisions and performance tuning approaches
- Applied AI-assisted iteration throughout development to validate design choices, troubleshoot issues, and streamline implementation across backend, frontend, testing, and deployment layers

SmartSyllabus

Academic Planning Platform | January 2026 – Present

- Collaborated in a team of six to design and build a full-stack web application for academic planning
- Developed REST APIs using Flask to handle authentication, scheduling, and data management across 27 endpoints
- Designed database schemas and implemented secure authentication using JWT and hashed passwords
- Integrated PDF parsing to extract structured data and automate scheduling workflows
- Built responsive frontend components using React and managed application state using React Context
- Contributed to testing, debugging, and improving application performance through iterative development

CERTIFICATIONS:

AWS Certified Cloud Practitioner | January 2026

Oracle Certified Associate, Java SE 8 Programmer | July 2025

AWARDS & ACHIEVEMENTS:

Dean's List Scholar

University of Toronto Mississauga | June 2024, June 2025

- Awarded for maintaining a CGPA of **3.5** or higher