Chaitanyaa Chopraa

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Summary

Computer Science graduate (Dec 2025, University of Victoria) with a Software Systems specialization and business minor, and hands-on experience delivering production-quality software through co-op, contract, and project-based work. Experienced in full-stack and backend development using Python, JavaScript/TypeScript, React, Node.js, REST APIs, Docker, and modern tooling, with additional experience in Unity and Unreal Engine for interactive systems. Demonstrated ownership and attention to detail through industry work in QA/QC process design and contract web development, building scalable systems, improving performance, and delivering reliable real-world solutions.

Education

University of Victoria Victoria, BC, Canada
BSc, Computer Science — Software Systems • Business Minor *Sept 2021 – Dec 2025*
Graduating GPA: 8.3 / 9.0
Relevant Coursework: Software Engineering, Web Development, Databases, Algorithms and Data Structures, Operating Systems, Software Testing and QA

Skills

Programming Languages: JavaScript, TypeScript, Python, Java, C, C++, Assembly
Frontend: HTML5, CSS3, Tailwind CSS, Bootstrap, React, Vite, Responsive Design
Backend & APIs: Node.js, Express, REST APIs, Authentication (JWT)
Databases: MongoDB, PostgreSQL, MySQL, Firebase
AI & Data Tools: ChatGPT, Gemini API, Microsoft Copilot, Copilot Studio, Prompt Engineering
DevOps & Systems: Git, Docker, Linux, CI/CD Concepts
Engineering & QA: Debugging, Microservices, Scalability, Distributed systems, JUnit, pytest, JMeter
Soft Skills: Problem Solving, Systems Thinking, Ownership, Collaboration, Communication

Professional Experience

Houle Electric Jan 2024 – Aug 2024
Co-op Project Manager / Assistant *Cowichan District Hospital Redevelopment*

- Developed and implemented robust Quality Assurance (QA) and Quality Control (QC) processes for the Cowichan District Hospital redevelopment project.
- Successfully executed effective QA/QC workflows to ensure project completion on time and in compliance with quality, safety, and regulatory standards.
- Played a pivotal role in configuring Procore by designing a reusable, company-wide QA/QC template, now actively adopted across multiple projects.
- Managed high-volume documentation, inspections, and reporting, maintaining accuracy and accountability across field and management teams.

Infinity Outdoor Pvt. Ltd Delivered 2025
Contract Web Developer

- Designed and launched a responsive marketing website to enhance brand visibility and showcase advertising campaigns.
- Built the application using React, Vite, and Tailwind CSS, achieving a 35% improvement in load times through optimized component architecture.
- Collaborated closely with stakeholders to align design, content, and functionality, delivering a modern and data-driven user experience.

Technical Projects

Social Spark — AI Brand & Influencer Platform *React, Node.js, MongoDB, Gemini API, Docker*

- Developed an AI-driven platform to improve brand–influencer collaboration through intelligent campaign matching and analytics.
- Integrated the Gemini API to automate content evaluation, generate campaign recommendations, and provide engagement insights.

- Designed secure authentication and backend services to support scalable user interactions and data processing.
- Designed scalable backend services with clear API boundaries to support future feature expansion.

SwiftTrade - Day Trading System *Python, REST APIs, Docker, JMeter, MongoDB, RabbitMQ, Redis*

- Designed and developed a full-stack day trading system supporting user authentication, wallet management, market orders, and limit orders.
- Implemented a custom FIFO-based order matching engine with sorted buy and sell order books and support for partial order fulfillment.
- Exposed secure REST APIs and containerized the system using Docker to enable scalable deployment and testing.

Procedural Building Generator *Unity, C#, Procedural Generation*

- Developed a procedural building generation system in Unity using C#, enabling automatic creation of modular and scalable building layouts.
- Designed algorithms to dynamically assemble structures from reusable components, increasing level variety and design efficiency.
- Focused on performance optimization and editor usability to support rapid iteration and real-time generation.

Mini Football Game *Unreal Engine, Blueprints, Game Physics*

- Built a 3D mini football game prototype in Unreal Engine, implementing player controls, ball physics, goal detection, and scoring logic.
- Designed interactive gameplay mechanics using Unreal Engine Blueprints to ensure responsive movement and realistic ball interaction.
- Implemented visual and gameplay feedback systems, including score updates and goal reactions, to enhance player experience.

RhythmBeats *Arduino, Teachable Machine, Sensors*

- Developed a physical music composition system using Arduino and sensor-based inputs to detect and classify musical blocks.
- Integrated a Teachable Machine model to map physical inputs to musical notes and instrument sounds.
- Designed the system to provide reliable real-time feedback and an engaging tangible interaction experience.

SceneCraft *Arduino, AI, Physical Interaction*

- Built an interactive storytelling tool that combines physical object manipulation with AI-generated narrative prompts.
- Designed intuitive tangible interactions to support creativity and engagement for young users.
- Integrated AI logic to dynamically generate story elements based on user input sequences.

Additional

Interests: Learning modern technologies, working on cars, collecting sneakers, video games