

Kolin Nielson

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Summary

Innovative and detail-oriented **Software Engineer** with hands-on experience in **full-stack web development, iOS app development, and game design**. Passionate about creating efficient, user-friendly applications and solving complex technical challenges. Adept at **collaborating in Agile teams**, integrating APIs, and optimizing system performance.

Technical Skills

- **Languages:** C#, C++, Python, Swift, JavaScript, SQL
 - **Web Development:** Vue.js, React Native, HTML, CSS, JavaScript
 - **Backend & APIs:** Node.js, Express, Flask, RESTful APIs
 - **Databases:** MongoDB, SQLite, SQL
 - **Mobile Development:** Swift (iOS), React Native (Android/iOS)
 - **Game Development:** Unity, C#, NavMesh AI, ML-Agents
 - **Cloud & DevOps:** Render, Firebase, GitHub, CI/CD
 - **Version Control:** Git, GitHub, Agile Development
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Projects

Workout Logger (Full-Stack Web App)

- ♦ **Purpose:** Helps users track and manage workout sessions with a structured routine.
- ♦ **Technologies:** Vue.js, Node.js, Express, MongoDB, JWT Authentication
- ♦ **Features:**
 - ✓ Interactive SPA with dynamic updates
 - ✓ Secure login/logout with JWT authentication

- ✓ RESTful API with CRUD operations for workouts
 - ✓ Real-time session tracking and timer
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Deadline: Zombie Survival Game (Unity Game Development)

- ◆ **Purpose:** A **fast-paced** zombie survival game inspired by COD Zombies with **AI-driven mechanics**.
 - ◆ **Technologies:** Unity, C#, NavMesh AI, Shaders, Particle Systems
 - ◆ **Features:**
 - ✓ **Dynamic AI:** Pathfinding for zombie hordes
 - ✓ **Boss Battles:** Unique attack patterns & move sets
 - ✓ **Skill-Based Gameplay:** Headshot bonus, power-ups
 - ✓ **Performance Optimization:** Object pooling, multithreading for smooth FPS
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Collaborative Whiteboard (Real-Time Web App)

- ◆ **Purpose:** Enables multiple users to **draw & collaborate in real-time** on a shared canvas.
 - ◆ **Technologies:** Vue.js, WebSocket, Node.js, Express, HTML5 Canvas
 - ◆ **Features:**
 - ✓ Instant updates for all users via WebSocket
 - ✓ Pen, eraser, color picker, and brush control
 - ✓ Automatic sync for new users joining
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WeatherGrid (iOS App Development)

- ◆ **Purpose:** Displays **real-time weather data** in a **7x5 grid format** based on user location.
 - ◆ **Technologies:** Swift, Xcode, CoreLocation, OpenWeatherMap API
 - ◆ **Features:**
 - ✓ **CoreLocation integration** for precise weather data
 - ✓ **Dynamic UI:** Temperature-based color gradients
 - ✓ **Error handling** for missing data
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Unity Reinforcement Learning AI (Machine Learning in Unity – Ongoing Project)

- ◆ **Purpose:** Researching **adaptive AI behavior** using **reinforcement learning**.
- ◆ **Technologies:** Unity, ML-Agents, C#, Python
- ◆ **Features:**
 - ✓ AI training using **ML-Agents Toolkit**

- ✓ **Custom AI behaviors** and adaptive learning
 - ✓ Performance optimization with **state machines**
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Work Experience

IT Intern – Sunrise Engineering, Fillmore, UT (Jan 2021 – Jan 2023)

- ◆ Provided **technical support**, troubleshooting hardware/software issues
 - ◆ Assisted in **system upgrades & cybersecurity enhancements**
 - ◆ Solved time-sensitive technical challenges for improved workflow
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Sales Representative – Fox Pest Control, Buffalo, NY (May 2024 – Aug 2024)

- ◆ **Exceeded sales targets** through **door-to-door sales & strategic pitching**
 - ◆ Built **client relationships**, tailoring pest control solutions for homeowners
 - ◆ Contributed to **regional sales growth** via persuasive communication
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HVAC Apprentice – Arctic Air, Delta, UT (Jan 2017 – Jan 2021)

- ◆ Supported **HVAC system installation & repair**
 - ◆ Worked with senior technicians, **enhancing service efficiency**
 - ◆ Developed strong **mechanical and troubleshooting** skills
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Education

🎓 **B.S. in Software Engineering** (*Expected April 2025*)
Utah Tech University – Saint George, UT

🎓 **Associate in Pre-Engineering** (*May 2022*)
Snow College – Ephraim, UT