

Nathan Hinthorne

Kent, WA | nathanrh856@gmail.com | [linkedin.com/in/nathan-hinthorne](https://www.linkedin.com/in/nathan-hinthorne)

Portfolio: www.nathanhinthorne.com

EDUCATION

University of Washington Tacoma

Bachelor of Science in Computer Science and Systems, Minor in Mathematics

GPA: 3.92, Cum Laude
Graduation: Mar. 2025

Green River College

Associate of Arts

GPA: 3.97, Dean's List
Graduation: June 2022

RELEVANT WORK EXPERIENCE

Fullstack Software Developer Intern | Global Radio Outreach

Mar 2025 - Present

- Build and enhance fullstack applications for outreach website and CMS dashboard using Next.js, React.js, TailwindCSS, Node.js, Nest.js, Postman, and MongoDB
- Collaborate within a cross-functional team on project planning, milestone tracking, and agile development cycles. Train and mentor new software developer interns
- Configure and maintain technical infrastructure through containerization (Docker) and work with CI/CD pipelines (GitHub Actions) for automated linting, testing, and deployment processes to ensure code quality and streamlined development workflows
- Conduct comprehensive code reviews for the development team and maintain high code quality standards through thorough testing and debugging, resolving technical challenges to enhance application performance and reliability

Research Assistant | SmartCity Project, University of Washington Tacoma

Dec 2024 - Mar 2025

- Developed ML pipeline for real-time road crack detection and segmentation on edge devices (car-mounted cameras), optimizing for performance constraints in IoT deployment scenarios
- Integrated computer vision preprocessing techniques (Local Derivative Pattern and High-Frequency Component) with deep learning models to enhance SAM model's segmentation capabilities
- Improved model accuracy by 56% through systematic evaluation and fine-tuning under large-scale urban image datasets
- Delivered weekly technical presentations on progress and model evaluations, keeping the team up to date

VR Developer Intern | Dimension XR (for further details, see portfolio)

Jun 2023 - Oct 2023

- Developed three interactive exhibits for VR museum in Unity Game Engine, including real-time sound wave exhibit
- Integrated multiple data streams (controller inputs, procedural mesh generation, audio synthesis) in Unity to create synchronized interactive 3D experiences
- Implemented 20+ C# scripts featuring event-driven architecture for real-time interactions, animations, and audio systems
- Optimized procedural mesh updates for smooth real-time performance in VR environment using XR Interaction Toolkit

PROJECTS

Bird Identifier App | Vue, Vite, Capacitor, JavaScript, Node.js, Firebase, HTML, CSS, Python, TensorFlow

github.com/NathanHinthorne/bird-identifier-app

- Developed a full-stack Android mobile app for bird identification using audio recognition, combining machine learning with a passion for ornithology
- Engineered backend using Firebase, including real-time database and authentication systems
- Transformed raw, unstructured bird audio into suitable data for training and deploying a TensorFlow CNN model

Dungeon Adventure Game | Java, SQL, JavaFX (for further details, see portfolio)

github.com/NathanHinthorne/Fallen-Champions

- Led a team of two in iteratively developing a dungeon adventure game in an Agile manner with user stories
- Utilized multiple design patterns such as MVC, Singleton, Memento, Builder, Factory, and Mock Object
- Experienced the SDLC by writing an SRS document, designing UML diagrams, implementing the designs in sprints, and deploying the game as an installable application

ADDITIONAL

Extracurricular Activities: Puget Sound Programming Competition, International Collegiate Programming Contest

Leadership/Service: Former president of Campus Adult Ministry at University of Washington Tacoma

Programming Experience: Eight years of experience in programming, honing skills across various technologies.

SKILLS

Programming Languages: Python, C#, Java, JavaScript, TypeScript, SQL, HTML/CSS

Software Development: .NET, Android Development, Edge Device Optimization, Real-time Systems, Object-oriented Programming, Functional Programming, Agile Methodologies, Git, CI/CD Pipelines, Docker, RESTful APIs, Debugging and Testing, Concurrency, UI/UX Design

AR/VR/3D Development: Unity Game Engine, XR Interaction Toolkit, Real-time 3D Rendering, Procedural Mesh Generation, Multi-stream Data Integration, C# Scripting, Event-driven Architecture

Machine Learning & Computer Vision: TensorFlow, PyTorch, Keras, Scikit-Learn, Model Optimization (Quantization, Pruning), TFLite, NumPy, Pandas, Matplotlib, CNN Architectures, Image Preprocessing, ETL Pipelines, Genetic Algorithms, Graph Theory, Multivariable Calculus, Linear Algebra, Statistical Analysis, Statistical Modeling, Data Mining

Frontend: React.js, Vue.js, TailwindCSS, Motion.js,

Cloud & Backend: Node.js, Express.js, Nest.js, PostgreSQL, MongoDB, REST APIs, API Endpoints and Middleware, Firebase, Cloud Computing

Tools & Platforms: Conda, CUDA Toolkit, Jupyter Notebooks, Postman, GitHub Actions, Visual Studio, VSCode