Ryan Tat Nguyen

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EDUCATION

University of Utah, John and Marcia Price College of Engineering Salt Lake City, UT
Bachelor of Science in Computer Science *August 2020 - May 2025*

- Relevant Coursework: Senior Capstone Project & Design, Algorithms & Data Structures, Software Practices I/II, Programming Languages, Computer Systems, Engineering Probability & Statistics, Ethics in Data Science
- GPA: 3.79

TECHNICAL SKILLS

- **Programming:** C, C++, C#, Python, Java, JavaScript, TypeScript, HTML/CSS, R
- **Frameworks/Libraries:** React, Angular, Node, Spring Boot, Django, Qt, Bootstrap
- **Databases:** MongoDB, MariaDB, MySQL, Microsoft SQL Server
- **Others:** AWS, VPS, Docker, Git, Qt Creator, Agile(Scrum), CI/CD(GitHub Actions), Windows, Linux(Ubuntu), Excel

PROFESSIONAL EXPERIENCE

C&T Driving School Salt Lake City, UT
Learning Management System (LMS) Administrator / Developer *February 2025 – Present*

- Deployed a production-grade Moodle platform on Ubuntu (VPS) with custom PHP plugins and MariaDB, delivering a scalable, secure, and high-performance learning experience
- Architected a high-throughput MariaDB backend (normalized schema, targeted indexing, prepared statements, and connection pooling), improving data retrieval speed by 40% and sustaining stable performance under concurrent user load
- Automated backend reporting workflows for LMS compliance using Python scripts, SQL queries, and cron scheduling, implementing error handling, data validation, and scheduled backups, reducing manual verification time by over 50% and improving accuracy
- Integrated secure Stripe payments, automated email workflows, and OAuth-based authentication, streamlining the student enrollment process and cutting support issues by 60%

Freelance Web Developer *December 2024 – February 2025*

- Re-architected the frontend from legacy templates to a React/Angular component architecture, reducing maintenance overhead by 25%, consolidating 1,200+ lines of duplicated UI logic, and increasing development velocity by 15%
- Standardized a reusable component library and shipped a minimal, user-focused UI (clear navigation, language toggle, responsive layouts, prominent contact paths), reducing support tickets by 30%
- Optimized site performance through lazy loading, code splitting, and asset compression, improving page load times by 45% and enhancing Core Web Vitals scores
- Integrated analytics tracking (Google Analytics) to monitor user behavior and conversion funnels, providing insights that informed UX and content updates, resulting in a 80% increase in user interactions

PROJECT EXPERIENCE

NCAA Picks, Full-Stack Web Application *December 2024 – April 2025*

- Developed a full-stack college football prediction platform using TypeScript, Java, React, Angular, Node.js, Spring Boot, MongoDB, and AWS, enabling users to compete in virtual points leagues and make weekly game predictions without real-money betting
- Implemented dynamic prediction scoring algorithms and backend cycle calculations in Spring Boot, supporting over 2,800 prediction entries and ensuring accurate, up-to-date leaderboard results through comprehensive integration testing

Sprite Editor, Desktop Application *August 2024 - October 2024*

- Designed and developed a cross-platform Sprite Editor in C++ using Qt Creator, implementing a modular MVC architecture with real-time frame rendering, tool management, and animation playback to streamline professional pixel art creation
- Implemented advanced usability enhancements such as text-to-speech functionality, dark mode, and FPS-based animation preview, improving accessibility, productivity, and overall user experience for digital artists and developers

Card Noir, Educational Desktop Application *April 2024 - May 2024*

- An educational blackjack desktop game built with C++ and Qt Creator, integrating Box2D physics-based animations, text-to-speech, and adaptive dealer AI to deliver interactive tutorials and realistic gameplay, boosting user engagement by 30%
- Engineered a high-performance rendering pipeline by fine-tuning Box2D physics calculations and Qt graphics routines, reducing frame latency and enhancing animation smoothness across multiple gameplay environments

Chatterbox, Client–Server Application *December 2023 - January 2024*

- A TCP-based client–server chat application in C#, implementing asynchronous socket communication, structured logging, and robust error handling to ensure reliable, low-latency message delivery across networked clients
- Designed a user-friendly GUI and real-time connection feedback, improving usability and debugging efficiency by 40%

ACHIEVEMENTS

- Earned Dean's List honors for six semesters at the University of Utah, demonstrating sustained excellence in Computer Science
- Led independent research on AI-driven healthcare solutions, authoring two technical papers, informing academic and software development initiatives