Jack Morris

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Education

- **Bachelor of Science in Computer Science**
  Embry-Riddle Aeronautical University (ERAU), Daytona Beach, FL
  Spring 2024

- **Master of Science in Cybersecurity Engineering**
  Embry-Riddle Aeronautical University (ERAU), Daytona Beach, FL
  Spring 2025

Technical Expertise

- Strong background in software development, cybersecurity, and system architecture
- Experienced in designing and implementing secure, scalable applications
- Rapidly adapts to new programming languages, frameworks, and technologies

Technical Skills

- Programming/Scripting: Python, TypeScript, Go, C#, Bash
- Cloud/Devops: Docker, AWS
- Databases: SQL, MongoDB, Firebase
- Networking and Security: NATS.io, Linux Security, Firewalls

Work Experience

XR Lab – Lead Backend Developer (2 Years)

- Designed and maintained backend infrastructure with a focus on fault redundancy and autoscaling
- Implemented high-throughput messaging systems to support real-time XR applications
- Developed and optimized server infrastructure to handle dynamic workloads efficiently
- Led backend development and integration with frontend XR technologies
- Designed and deployed a system for aggregating widespread live ADS-B data using NATS.io
- Utilized Linux VPS cloud architecture and containerization for scalable and efficient deployments
- Regularly coordinated with the XR development team to ensure high availability
- Identified, resolved, and contributed a fix for a performance issue in NATS.io, fixing a critical memory leak

OneSky/Flexjet – Software Development Internship (1 Year)

- Developed both internal and public-facing software using C#, Angular, TypeScript, SQL, and Twilio
- Built RESTful APIs and improved database performance through query optimization
- Assisted in automating deployment process using CI/CD pipelines

Olympia High School – Technical Support Internship (2 Years)

- Assisted the High School Technical Support Representative with maintenance and security updates of school computers
- Performed troubleshooting and repair on student and faculty computers

Project Experience

Automated Scheduling System

- Developed a web application to automate scheduling, replacing a manual spreadsheet-based process
- Designed an optimized algorithm to efficiently schedule ~50 people into classes while handling constraints and resolving conflicts
- Achieved schedule generation in milliseconds while ensuring optimal class distribution and conformance to user needs
- Led backend development and transitioned system from a webapp to a native application

Interactive Campus Map

- Designed and developed an interactive campus map along with an associated administrative management tool using Angular, MongoDB, and Cloudflare infrastructure
- Collaborated in an Agile team, working closely with the customer to plan and develop efficiently

Server Administration

- Managed and secured a Windows Server 2019 environment, including Active Directory, DHCP, NAT routing, and SMB file sharing
- Utilized Hyper-V virtualization to create and manage multiple virtual server instances\
- Implemented security best practices, including access control, firewall configurations, and regular system updates
- Mentored a junior in server administration and network management

Awards

- Awarded 1st place in Fourth Annual Orange County Capture the Flag offensive cybersecurity competition (2021)