

# Michael Biskup

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## Education

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### University of Central Florida

Aug. 2022 – Dec. 2025

*Bachelor of Science, Computer Science*

- **Relevant Coursework:** Software Development, Artificial Intelligence, Bioinformatic Algorithms, Natural Language Processing, Senior Design, Object-Oriented Programming, Game Development, Computer Graphics, Cybersecurity

## Projects

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**Vending Machine Map** | *MERN (MongoDB, Express.js, React, Node.js), TypeScript, JavaScript, CSS, Mapbox, Amazon Lightsail*

- Served as the **Project Manager** and **Full Stack Developer** in a team of 6, leading the development of a web application that allows user to view and interact with a live map of UCF
- Contributed to the planning and development of **15+ RESTful API** endpoints supporting session based authentication, profiles, favorites, ratings, comments, and admin access
- Implemented backend logic to correlate user contributions stored across separate **MongoDB** collections, supporting accurate user profiles and data

**Clinical Imaging VR Platform** | *Unity, Meta XR SDK, C#, 3D Slicer, Python, Microsoft Azure*

- Created a **medical imaging pipeline** which transforms raw medical data into high-fidelity, volumetric 3D models using 3D Slicer, including segmentation, color mapping, and volume rendering for VR use
- **Automated CT data processing with Python** (pydicom, PIL, NumPy) to generate standardized 2D slice images and volumetric models with precise real world scaling, **reducing preprocessing time by ~80-90%**
- Developed **CT visualization systems** enabling real-time manipulation of volumetric models while retaining smooth performance

**Portfolio Website** | *Java, JavaScript, HTML, CSS, Spring Boot, MariaDB, Bootstrap, Cloudflare*

- Designed a full stack portfolio website backed by a **Spring Boot REST API**, that **dynamically** loads projects skills and experiences from a MariaDB database
- Modeled relational database schemas, supporting **scalable storage** and retrieval of portfolio projects, skills, and experiences
- **Self-hosted** on a Mac Mini and secured via **Cloudflare for DNS management** maintaining about a **~99% uptime**

**Galleon Mod** | *Lua | Event-Driven Architecture | Custom Data Structures | Real-Time Systems*

- Shipped a production mod used by **12,000+ players**, handling real-time player input and engine events in a live simulation environment
- Implemented a **custom binary search tree (BST)** to efficiently track player-vehicle assignments, supporting insertion, deletion, and lookup under dynamic game state changes
- Designed **real-time state management logic** to synchronize player boarding, eviction, and teleportation while maintaining consistency across engine callbacks

## Experience

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### Walt Disney World

April 2023 – August 2023

*Deep water Lifeguard*

*Orlando, FL*

- Demonstrated strong leadership and responsibility by ensuring the safety of guests in water attractions.

## Technical Skills

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**Languages:** C, C++, Java, TypeScript, JavaScript, HTML, CSS, Powershell, Python, C#, Bash, SQL, Lua

**Frameworks/Libraries:** Express.js, React, React Native, Bootstrap, Tailwind CSS, NumPy, pydicom, Spring Boot, MapBox

**Tools:** MariaDB, MongoDB, MySQL, Node.js, Git, GitHub, GitLab, Jira, VirtualBox. Apache, AWS, Swagger, Unity, Visual Studio Code, Ubuntu, Eclipse, Wireshark, Nmap, Netstat, 3D Slicer