Lucas McClean

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Education

University of Central Florida — Orlando, FL
Bachelor of Science in Computer Science | *GPA: 4.0* | *Burnett Honors College* — *Aug. 2024 – May 2027*

Experience

Software Developer | *Python (Django), Celery, Docker, AWS* — Mar 2025 – Present
UCF Center for Distributed Learning - Techrangers Team — *Orlando, FL*

- Scaled websocket message processing by roughly 300% by refactoring into an AWS Lambda microservice
- Minimized tail latency for user-facing operations up to 70% by distributing large tasks to a separate queue
- Validated and optimized system performance by automating AWS CDK deployments and k8 load tests
- Improved backend consistency by abstracting client interfaces and hydrating clients internally to Celery
- Increased reliability and onboarding speed by adding type hints, documentation, and targeted unit tests
- Streamlined new-hire onboarding by clarifying failures through partial success states and refining error messages
- Improved enrollment system by enabling self-enrollment and integrating Canvas API for fallback user searches

Sound & Lighting Technician — Jan 2022 – Jun 2023
South Tampa Fellowship — *Tampa, FL*

- Led a team of 3 in preparing and delivering sound, lighting, and visual content for audiences of up to 250
- Produced 5–6 weekly lighting scenes across multiple stages, balancing pre-programmed and live control
- Improved aesthetics and technical reliability by rewiring and staging new lighting and sound equipment

Projects

Crimson Brawl | *Winner of **Best Game** at Knight Hacks VIII, Godot, GDScript, EEG* — Oct 2025

- Reduced EEG input lag to near-zero by implementing a JSON websocket protocol for real-time player input
- Enabled dual input support by extracting controller logic into an abstract class for both the EEG and keyboard
- Streamlined gameplay extensibility by designing a modular state machine, simplifying addition of new mechanics

LimitL.ink | *Go, PostgreSQL, Docker* — Mar 2024 – Present

- Engineered a reliable link shortener with graceful recovery from runtime failures using channel signaling
- Architected a modular service layer to standardize database access and decouple business logic from storage
- Secured sensitive user data by generating high-entropy admin access tokens and using bcrypt to hash passwords

Terminal Task | *Go, Cobra* — May 2024 – Jun 2024

- Ensured cross-platform compatibility by conditionally modifying behavior using Go's standard library
- Designed a modular API layer with four buffer and FS interfaces to maximize binary portability
- Implemented live terminal feedback by rendering output before screen refresh and isolating input logic per task
- Synchronized in-memory task order with render buffer to support consistent real-time updates
- Persisted independent task lists and configurations via direct integration with file system APIs

Quick Note | *Svelte, PostgreSQL, Docker* — Mar 2024 – Apr 2024

- Implemented a full-featured CRUD API with PostgreSQL backend and containerized local deployment
- Leveraged Svelte's component system to unify styling and streamline frontend reuse
- Synchronized UI state with backend by confirming API calls prior to DOM updates

Crown & Anchor | *JavaScript, HTML, CSS* — Feb 2024 – Mar 2024

- Designed multi-page browser game preserving session state across reloads and internal navigation
- Utilized the localStorage API to persist game state and metadata across browsing sessions
- Modularized reusable UI components to streamline development and maintain behavioral consistency

Technical Skills

Languages: Go, Python, HTML/CSS, JavaScript, Svelte, Rust, TypeScript, C, GDScript, Lua, Bash, SQL
Tools & Dev Env: Git, Neovim, Tmux, Linux (Arch, Gentoo, Fedora), Cargo
Platforms & DBs: Docker, Celery, Django, Godot, PostgreSQL, MongoDB, Redis