Anunciacion, Lue Kely D.

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Skills

Languages: Typescript, Javascript, Python, Java, GLSL, SASS, CSS
Frameworks: Next, Nuxt, SvelteKit, React, Vue, Three.js, Astro
Database: Postgres, Supabase

Experiences

Front-End React Intern (520 IT Services) **August - January 2025**

- Rebuilt attendance system frontend from legacy PHP templates to React with Shadcn UI, modernizing architecture and closing security vulnerabilities that allowed unauthorized clock-in manipulation
- Implemented HTTP-only cookie authentication with role-based access control and protected routing for Team Lead and Employee interfaces
- Developed server-synchronized datetime handling with timezone support, overtime policy validation, and comprehensive error handling for database constraints

Projects

FairWrite (github.com/Fair-Write/Client-Side)

- Built a full-featured text editor in SvelteKit integrating AI-powered bias detection, supporting multiple file formats with automatic style preservation and visual highlighting of flagged content
- Developed advanced editing capabilities including interactive word replacement, rich-text formatting controls, and document processing pipeline maintaining formatting integrity across imports and exports.
- Designed complete frontend application with feedback visualization dashboard, admin panel for detection rule management, and mobile-responsive interface optimized for government use

Gameboy CPU (Sharp LR35902) in Typescript (github.com/LueKely/Astro-Boy)

- Built a Game Boy CPU (Sharp LR35902) in TypeScript that replicates original hardware behavior, implementing the complete CPU instruction set, interrupt handling, and cycle-accurate timing.
- Designed an interactive React-based interface for stepping through CPU execution, visualizing cycles, and inspecting registers and internal state in real time.
- Validated accuracy against official hardware specifications and industry test ROMs, ensuring correct and timing synchronization.

Audio Visualizer using Three.js (github.com/LueKely/Audio-Visualizer)

- Created an audio visualizer using Web Audio API and Three.js to analyze music in real-time, converting frequency data into synchronized particle-based visual animations
- Implemented GPU-accelerated rendering with WebGL framebuffer objects to offload particle simulation from CPU, enabling complex visual effects
- Engineered audio processing pipeline that extracts and maps frequency/amplitude data to visual parameters for responsive audio-reactive experience

Education

Cavite State University Bacoor Campus **2021-2025**
Bachelor In Computer Science