

Koby Ramsey

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Education

Louisiana State University — Baton Rouge, LA
B.S., Computer Science, Minor in Mathematics — 2025
Concentration: Software Engineering

Louisiana School for Math, Science, and the Arts (LSMSA)
Advanced STEM Curriculum

Projects

Lotus Leaf - A Peer-to-Peer File Sharing System

- Contrived and implemented a **BitTorrent**-inspired peer-to-peer file sharing system using Python TCP sockets and multithreading.
- Built a centralized tracker for peer discovery and metadata aggregation, enabling decentralized file transfer.
- Implemented chunk-based file downloads with round-robin peer selection and fault tolerance for peer disconnections.
- Validated distributed behaviour using multiple **VMware** instances to simulate real-world network conditions.

PokeBot - A Pokemon-themed Discord Bot

- Developed an event-driven Discord bot in Java (**Javacord**) supporting turn-based battles, trading, leveling systems, random events, and persistent user data.
- Designed modular game logic and stat systems using an **Agile** workflow and using Jira as a feature progress tracker.
- Used Java multithreading to manage concurrent event handling and game states across multiple Discord servers.

SongGuesser — A Full-Stack Web Application (LSU Hackathon 2024)

- Built a full-stack web application using **Flask (Python)**, **React + Vite**, and **MongoDB**, allowing users to guess the geographic origin of songs from 30-second audio clips.
- Implemented REST APIs, scoring logic, and dataset processing under time constraints using a **Scrum-based development cycle**.
- Helped drive feature prioritization and execution in a three-person team to deliver a functional **Minimal Viable Product** within 24 hours.

Technical Skills

Languages: Python, Java, C++, JavaScript, SQL

Frameworks/Libraries: React, Flask, Javacord, Flutter, Next.js, Node.js

Tools & Systems: Git, Jira, VMware, Linux, VS Code, Firebase

Skills: Agile Development, Scrum, Requirements Modeling, ER Modeling