

Andre Harper III

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Durham, North Carolina

TECHNICAL SKILLS

Languages: Go, Python, Javascript, Java, SQL, HTML, CSS

Databases: PostgreSQL, MongoDB, Redis

Tools: Express, Docker, Git, AWS (S3)

Concepts: Message Queues, Distributed Systems, RESTful APIs, Agile Development, Database Design

EDUCATION

University of North Carolina at Charlotte

Charlotte, North Carolina

Bachelor of Science in Computer Science

May 2025

- Relevant Coursework: Object Oriented Programming, Operating Systems, Data Structures and Algorithms, Database Design and Implementation, Software Engineering, Cloud Computing for Data Analytics, CodePath Technical Interview Prep

PROFESSIONAL EXPERIENCE

Allstate

Remote

Unlicensed Service Representative

May 2022 – Nov 2022

- Translated complex policy and system constraints into clear, actionable solutions for non-technical users, enhancing problem-solving efficiency.
- Queried systems to diagnose customer issues and retrieve critical information, ensuring data-driven resolutions.
- Collaborated with external teams to escalate, track, and follow up on technical issues, ensuring customer satisfaction

PROJECTS

Resume Processing Pipeline

Go, PostgreSQL (pgvector), Valkey (Redis), S3, Docker, Gemini API

- Architected a distributed, event-driven backend in Go with a REST API for file ingestion and a concurrent worker service for asynchronous AI processing.
- Implemented an end-to-end data pipeline using Valkey as a job queue, S3 for object storage, and PostgreSQL (pgvector) for persistent job tracking and vector storage.
- Containerized the full stack (Go API, Go Worker, Postgres, Valkey, MinIO(S3)) using Docker Compose and automated integration testing within a GitHub Actions CI pipeline.

Programming Language Interpreter

Go, Lexical Analysis, Parsing, AST, Interpreter Design

- Engineered a functional interpreter for the Monkey programming language in Go, demonstrating a deep understanding of language design and compiler fundamentals.
- Implemented a recursive descent parser to construct an Abstract Syntax Tree (AST) and an evaluation engine to execute code from the generated tree.
- Built support for core language features, including variable bindings, control flow, functions with closures, and complex data types like arrays and hash maps.

AI-Powered Career Search Platform (Capstone) *Java, Spring Boot, MongoDB, REST API, OpenAI API, Scrum*

- Collaborated in an Agile team to build a job search platform using Java Spring Boot and MongoDB, contributing primarily to frontend development and feature implementation
- Integrated OpenAI API to provide resume analysis and improvement suggestions for users.
- Implemented pagination system for job listings to improve application performance and user experience.
- Participated in sprint planning, code reviews, and team coordination using GitHub and Scrum methodologies