

# Andre Harper III

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Durham, North Carolina

## TECHNICAL SKILLS

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**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

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### University of North Carolina at Charlotte

*Bachelor of Science in Computer Science*

Charlotte, North Carolina

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

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### Allstate

*Unlicensed Service Representative*

Remote

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

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### 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