

# Donahue Avila

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## BRIEF

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Senior Computer Science student with experience in web scraping and full-stack development. Designed and built a web scraping pipeline from scratch, handling data extraction, processing, and storage for millions of records. Strong foundation in TypeScript, React, and database design. Seeking a software engineering role focused on automation, frontend, or full-stack development.

## EDUCATION

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**University of Oklahoma**

*Bachelor of Science, Computer Science*

Norman, OK

May 2025

## WORK EXPERIENCE

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**Web Scraping and Automation Specialist**

*University of Oklahoma*

Norman, OK

June 2024 - Present

- Built a web scraping pipeline from scratch, automating data extraction of over ten million posts and profiles.
- Optimized data extraction using Python's asyncio API, maximizing resource utilization within proxy and account constraints, achieving 40x throughput.
- Implemented caching and request filtering, reducing bandwidth per registration from 50MB to 2.7MB (94% reduction).
- Designed and optimized a relational database to track scraping progress, manage account-feed mappings, and execute complex queries for efficiently distributing workloads across 2,000+ accounts and millions of records.
- Used pytest to validate assumptions while reverse-engineering an undocumented API, ensuring scraping logic handled responses correctly.

## SKILLS

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- **Programming Languages & Tools:** Python, TypeScript, JavaScript, SQL
- **Front-End Development:** React, HTML, CSS, Next.js
- **Back-End & Databases:** PostgreSQL, API Development, Server-Side Rendering (SSR)
- **Automation & DevOps:** Web Scraping, Browser Automation, Git, Unit Testing (pytest), Docker

## CERTIFICATES

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- The Joy of React – Josh Comeau (2023)
- CSS for JavaScript Developers – Josh Comeau (2023)

## PERSONAL PROJECTS

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**konekt.gg**

December 2023

[React](#) [Next.js](#) [PostgreSQL](#) [Amazon S3](#)

A social media app for users to match and meet online friends.

- Utilized Next.js for fast server-side rendering, measuring page performance using Lighthouse.
- Provided a high quality user experience for both mobile and desktop environments.
- Designed and implemented database schemas, optimized queries, and developed API endpoints.