

# Audric Serador

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## Education

### University of Illinois at Urbana-Champaign

Expected May 2026

B.S. Computer Science (GPA: 3.95 / 4.00)

Urbana, IL

- **Relevant Coursework:** Data Structures (C++), Software Design Lab, Prob & Stat in CS (Python), Discrete Structures, Intro to CS II (C++), Linear Algebra w/Computational Applications (Python), Foundations of Leadership

## Experience

### PURE (Promoting Undergraduate Research in Engineering)

Sep 2023 – Present

Research Software Developer

Urbana, IL

- Investigating the dynamics and behaviors of contagion in social media through simulations on a custom-built Twitter clone, built on **Next.js** and written in **TypeScript** to be deployed to **500+** participants for data gathering.
- Deployed a robust authentication system leveraging **Firebase** and **React**, employing custom hooks and effective state management integrated with a login page styled using **Tailwind** customization classes.
- Integrated interactive data visualizations using **React** and **D3.js**, empowering researchers to identify data trends.

### VoyagerNetz

July 2022 – May 2023

Software Engineer Intern

St. Charles, IL

- Leveraged **NLTK** and **SpaCy** libraries to engineer an intent recognition system using tokenization and POS tagging NLP techniques, successfully matching and recognizing keywords with approximately **70%** accuracy.
- Rearchitected codebase for modularity via object-oriented refactoring, reducing code redundancy by **30%**.
- Engineered a **JSON-based** data framework, streamlining user data imports and exports across all platforms.

## Projects

### Campus Dining App | *Next.js, TypeScript, React, Tailwind, AWS, PostgreSQL, Supabase, Prisma, Python, Selenium, Vercel*

- Scraped **1000+** data points from university dining hall websites using the **Selenium** library, pushed to a **PostgreSQL** database using **AWS Lambda** with **CloudWatch** for up-to-date food serving info and nutrition-informed food data.
- Launched a **Next.js** web app deployed on **Vercel**, utilizing **RESTful API** principles to deliver real-time dining hall times and personalized meal recommendations powered by **Supabase** for quick data access and user authentication.
- Designed a mobile-responsive UI using **React** and **Tailwind**, optimizing frontend database queries using **Prisma**.

### News Article Classification | *Python, SpaCy, TextBlob, Jupyter Notebooks, Pandas, Transformers, Bokeh, Flask, React*

- Leveraged NLP (**POS tagging**, **NER**, **sentiment analysis**) to analyze bias/opinion of public figures across **1 million** news articles, transitioning from **SpaCy/TextBlob** to **BERT-base/RoBERTa** models for **15%** improved accuracy.
- Built an interactive full-stack website using **Flask** and **React**, providing visual insights on media bias across public figures and news organizations using the **Bokeh** library through line graph and bar chart data visualizations.

### ClubMaster | *Python, Flask, Jinja2, Firebase, Bootstrap*

- Developed a social networking web app modernizing school-club management for students, teachers, and administrators, built on **Flask** with **Jinja2** and styled using the **Bootstrap** framework, winning **2nd** at STDL Hacks.
- Established secure sign-in/up with **Firebase Authentication** and empowered tailored interactions through realtime database access using **Cloud Firestore** to write and access user data.

### Discord Game Bot | *Python, Discord.py, MySQL, phpMyAdmin*

- Created and deployed an interactive Discord role-playing game bot built on **Discord.py**, enabling **150+** users to create, customize, upgrade, and battle other user-made entities featuring over **30** custom commands.
- Utilized **MySQL** to implement a robust and scalable database for the Discord bot storing over **1000** user profiles, entity information, and in-game items, using **phpMyAdmin** for data management and retrieval during gameplay.

## Technical Skills

**Languages:** Python, TypeScript, JavaScript, HTML/CSS, C++, C#, Java, Rust, SQL

**Technologies:** Next.js, Node.js, React.js, AWS, Bootstrap, Tailwind, Flask, SpaCy, NumPy, Pandas, Transformers, PostgreSQL, MySQL, Selenium, Discord.py, Git, Firebase, Docker, Vercel, Supabase, phpMyAdmin, phpPgAdmin

**Concepts:** Software Engineering, Machine Learning, Natural Language Processing, Human Computer Interaction, Agile Methodologies, DevOps, Frontend, Backend, UI/UX Design, Human Computer Interaction, Data Science, Data Analysis