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## EDUCATION

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**Purdue University**, West Lafayette, IN  
Bachelor of Science in Computer Science and Data Science

Expected Graduation: May 2025  
GPA: 3.99/4.00

**AWS Certification**  
Certified Cloud Practitioner

Validation Number: KRHKNR1C01B4QG5N

## EXPERIENCE

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**Software Engineering Intern, Deloitte**, 30 Rockefeller Plaza, New York, NY Jun. 2023 – Aug. 2023

- Built software within an agile scrum framework for Thomson Reuters law products Practical Law and Westlaw Edge.
- Implemented critical onboarding sections like demo sign-up and customer interaction analytics with **React**, **Redux-Saga**, and **Adobe Experience Manager HTL** (a domain-specific language for server-side rendering).
- Identified potential issues, fixed numerous bugs, and utilized **React Testing Library** to ensure a robust customer experience.

**Web Development Lecturer, Purdue University**, West Lafayette, IN Aug. 2022 – Dec. 2022

- Generated tangible value for 70 students by offering Purdue University's sole course on web development, CS 39000.
- Cultivated technical communication skills by breaking down & discussing technical concepts for 4-6 hours per week.
- Covered the practice and underlying concepts behind **HTML**, **CSS**, **JS**, **React**, **Express.js**, and **MongoDB**.

**Software Engineering Intern, Rogo**, Remington, IN May 2022 – Aug. 2022

- Migrated backend from AirTable to **AWS Lambda & DynamoDB** to improve scalability, rewrote backend with **Express.js & GraphQL**.
- Rebuilt and refined core operations **React** app responsible for planning, creating, and tracking robotic soil sampling missions.
- Provided data integrity for on-site sample collection via **RxDB** client-server data replication and custom file backup mechanism.

## PROJECTS

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**MyChess**, Purdue University, my-chess-engine.netlify.app Jul. 2023 – Present

- Building a **C++** chess engine with optimizations such as bitwise move generation with bitboards, mini-max with alpha-beta pruning and move ordering, and transposition caching with Zobrist hashing and two-tiers to support multiple replacement policies.
- Implementing and training a neural network from scratch in **Python** to produce weights for an **Efficiently Updateable Neural Network (NNUE)** to replace and improve upon traditional heuristic-based evaluation.

**Townie**, CS 30700, Purdue University, townie-game.vercel.app Jan. 2023 – May 2023

- Developed a web game in **Svelte** for users to explore new destinations with friends in a competitive scavenger hunt.
- Designed cost-effective and scalable architecture with **AWS (Lambda, API Gateway: WebSocket API, EC2)** and **Redis**.
- Employed graph database **ArangoDB** to efficiently build social networks and tailor friend and destination suggestions to users.
- Integrated **JWT** auth, **Twilio** SMS 2FA & notifications, **Mapbox** maps, and **Stripe** subscription payments for premium mode.

**Drawtic Phone**, BoilerMake Hackathon Finalist, Purdue University Jan. 2023 – Jan. 2023

- Invented a web game like Gartic Phone, where players draw mid-air over the camera frame, incorporating their environments.
- Applied **Google MediaPipe** ML model with custom linear algebra to detect user finger motions for mid-air drawing.
- Constructed **Flask** pub-sub system to relay live lobby updates and used **Redis** and **AWS S3** to store game session data and images.

**American First Finance Data Analysis**, The Data Mine, Purdue University Jan. 2022 – May 2022

- Worked alongside company data scientists to analyze company data using **Pandas**, **Matplotlib**, and **Scikit-learn** in **Python**.
- Trained linear regression and nearest neighbor models to identify underperforming regions and predict client lifetime values.

**HSE Apps Suite**, Code for Change, HSE High School Nov. 2020 – May 2021

- Collaborated with school admin to modernize course selection and information access, impacting 800+ students and 80+ faculty.
- Built full-stack applications with **React**, **Express.js**, **Node.js**, **MongoDB**, **Netlify**, **GCP App Engine**, and **MongoDB Atlas**.

## SKILLS

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**Languages** JavaScript, TypeScript, HTML, CSS, C++, C, Rust, Python, Java, SQL, Julia, Scala, WASM

**Frameworks** React, Svelte, React Native, Angular, Express.js, Django, Flask, wxWidgets

**Other** AWS (API Gateway, S3, Lambda, DynamoDB, EC2), Git, Node.js, GraphQL, MongoDB, ArangoDB, MySQL, Neo4j, RxDB