





ARYAN BAKSHI

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Education

Purdue University - West Lafayette

Bachelor of Science in Computer Science — Minor in Mathematics

- **Concentrations:** Software Engineering & Artificial Intelligence

Expected May 2028

West Lafayette, Indiana

Work Experience

Amazon Web Services (AWS)

Software Development Engineer Intern

June 2026 – Aug. 2026

Mountain View, CA

- Refactored `amazon-chime-sdk-component-library-react` system architecture to decouple dependencies enabling **WebRTC** pre-meeting device-readiness features ensuring full **backwards-compatibility** and persistent states during media handoff.
- Developed a pre-call device setup experience for **Amazon Connect Customer** in-app web calling flow—reducing contact abandonment & average handle time by **86%** and optimizing agent calls by **~1.5 mins** for over **4.5K** enterprise customers.
- Extended the Amazon Connect Endpoint Test Utility w/ WebRTC connectivity diagnostics—validating **UDP/TCP** reach, **STUN/TURN** relay, and Interactive Connectivity Establishment (**ICE**) candidate gathering plus bg-filter asset fetching.

Eli Lilly and Company

Software Engineering Intern

June 2024 – Aug 2024

Indianapolis, Indiana

- Achieved over **22x increase** in processing speed for weekly inactive user deletion by developing a **Python3** workflow automation script with the **Requests Library**, saving developers around **37 hours per year** of manual deletion cycles.
- Integrated **Veeva Vault's** regulatory **REST API** to program full-cycle user deletion pipeline automating authentication, role retrieval and validation, secure removal, inactive marker, and full audit trails while endpoint-testing with **Postman**.
- Established **enterprise standard** for regulatory compliance, now used by **1,200+** Global Regulatory Affairs personnel.

BASF


Data Science Intern

Aug 2024 – May 2025

West Lafayette, Indiana

- Improved forecast accuracy by iteratively refining **ARIMA** Time-Series Models & Long Short-Term Memory (**LSTM**)
- Reduced the Mean Absolute Percentage Error (**MAPE**) of TSMs from **27.4%** to **9.8%** on a dataset of over 50 years.
- Accelerated predictive analysis by engineering a **Python** pipeline with **BeautifulSoup** to web scrape USDA's WASDE Reports, parse into XML for software conformity, and clean **20,000+** records of U.S. Corn / Soybeans Supply & Use.
- Streamlined data-driven decision-making by developing a suite of over 15 **Matplotlib** data visualizations consisting of **Chained Decision Trees** and **Ridge Regression Models** to distill key insights from seasonal non-linear market data.

Projects

OpenSeat |  Source Code |  Live **Next.js** | **Occuspace** | **LibCal** | **Node.js** | **TypeScript** | **Supabase** | **Zod** | **Vercel**

PurdueTHINK Project Manager – Purdue Libraries & School of Information Studies (Client)

- Developed a study-space discovery platform used by **325+ students/staff**, integrating real-time occupancy data via **Occuspace API**, and room reservations, operating hours, & booking eligibility across Purdue Libraries via **LibCal API**.
- Designed a daily cron-based occupancy data pipeline with **60-second TTL caching**, 28-day historical analysis, and back-tested operational-hours recommendations for staff based on trend identification of **over 7,550 occupants/day**
- Automated staff room-request validation logic, reducing manual review time from **25 seconds** per request to **1 second**.

Barbera |  Source Code |  Live

Next.js | **Stripe** | **TypeScript** | **Supabase** | **PostgreSQL** | **Vercel**

- Architected and developed a full-stack web application with **180+ users** using **Next.js**, **React**, and **Stripe API** to serve as an all-in-one portfolio, scheduling, payment, and peer-review social platform for consumers to find preferred barbers.
- Designed and implemented a normalized **PostgreSQL** schema and secure backend using **Supabase**, handling user authentication, role-based access control, containerization, and data management with over **5 foreign key relations**.
- Enforced data integrity down at the database level by implementing **Row-Level Security (RLS)** policies using **SQL**.
- Designed and optimized **scheduling algorithm** to filter available time slots in real-time and handle **race conditions**.
- Automated deployment via **CI/CD pipeline** from **GitHub** with **Vercel**, ensuring continuous integration and delivery.

Technical Skills

Languages: Python, Java, C/C++, JavaScript/TypeScript, HTML/CSS/SCSS, R, SQL (PostgreSQL)

Frameworks & Libraries: React, Next.js, Node.js, Matplotlib, NumPy, Pandas, Spring Boot, Express.js

Developer Tools & Platforms: Git, GitHub, Postman, CI/CD, REST APIs, AWS, Azure, GCP, Vercel

Interests

Mr. Olympia | Fantasy Football | Table Tennis | Speedcubing | Meal-Prepping | *Suits* | Content Creation