

# Yog Tadhani

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## EDUCATION

### University of Virginia, School of Engineering And Applied Science

Current GPA: 3.8/4.0

Bachelor of Science: Computer Science, Minor: Engineering Business, Bridge Scholar

Graduation: May 2027

**Relevant Courses:** Software Engineering, Data Structures and Algorithms(Graph Theory included), Machine Learning in Image Analysis, Computer System and Organization(Assembly & C), Applied Circuits, and Digital Logic Design(VHDL), Calculus, and Linear Algebra

## SKILLS

**Languages:** Java, Python, JavaScript, HTML/CSS, SQL/SQLite/MySQL, JSON/XML, C/C++

**Tools:** Git/GitHub, Wordpress, Google reCAPTCHA, Google Firebase, Unity, MATLAB, Microsoft Office, Linux/Unix, SolidWorks

**Frameworks:** React, Node.js, JUnit, JDBC, Hibernate

## EXPERIENCE

### Organised Co

London, UK

June 2025 - July 2025

#### Software Engineering Intern

- Developed a scalable backend sync system with hexagonal architecture using **Wix REST API** to update supplier product data in real time, efficiently stored in **MongoDB**.
- Used Codex AI agentic coding for rapid prototyping and debugging complex API integrations, improving robustness and reducing sync errors.

### UVA Darden School of Business

Charlottesville, VA

Sept 2024 - May 2025

#### General Research Assistant

- Analyzed mobile money transactions in underrepresented African regions using **Rivanna HPC** (High Performance Computing), leveraging **Python**, **Pandas**, and **NumPy** to uncover financial patterns and market trends
- Designed and implemented optimization models using **Gurobi** to determine optimal farmer-to-market allocations, employing **linear programming**, **LP relaxations**, and integer constraints to maximize system-wide profit and efficiency

### IRDI Business Group LLC

Remote; CA

Jan 2025 - May 2025

#### Tier 1 Supervisor, Web Development Division

- Led development of a secure company website using **Laravel**, **PHP**, and **SQLite** with **MVC architecture**, managing admin and visitor interfaces while enforcing robust security practices

#### Web Developer Intern

Aug 2024 - Dec 2024

- Recovered company systems post-cyber attack by implementing advanced security protocols, optimizing website performance through **WordPress**, and registering software, ensuring compliance and operational integrity
- Increased website traffic to 20K views and onboarded 300+ users by enhancing WordPress content, customizing themes, and securing contact forms with **Google reCAPTCHA** to reduce spam and improve user trust

### UVA Department of Physics

Charlottesville, VA

Aug 2023 - May 2024

#### Quantum Physics Research Assistant

- Developed a computational model using **Python**, optimizing optical algorithms to achieve precision in holographic laser beam shaping and enhance the prediction of light patterns
- Utilized **NumPy** and **Matplotlib** for extensive data analysis and visualization, translating raw data into insights that supported precision in holographic laser experiments and quantum state measurement

## PROJECTS

### UVA Bus Route Management Database System | SQL/SQLite, RESTful API/Data Parsing, Java, JSON, JDBC

- Designed and implemented an SQLite database to store and manage bus route data, utilizing SQL queries to create tables and ensure efficient data retrieval and storage
- Integrated with UVA Devhub API to fetch and parse JSON data in structured Java objects for seamless handling and persistence in database
- Implemented algorithm to compute closest bus stop and recommend optimal bus line for the user

### Karabi(Timely Communication Mobile App) | Backend Team Lead | React Native, Expo, Google Firebase, Node JS

- Developed in React Native and Expo using Google Firebase for a secure user-friendly, cross-platform interface
- Managed group of students with weekly meetings, task handling, and lectured on mobile development
- Implemented smooth front-end to back-end (Node.js) integration, optimizing user interaction and real-time capabilities

### Zombie Game(A Shot in the Dark) + SunnyLand Game | Unity, C#, Google Firebase, VS Code

- Developed smart inventory and camera systems using Unity's libraries, showcasing logic development and system optimization
- Implemented Google Firebase for user authentication and secure progress storage, supporting smooth and secure gameplay