

Aditya Borkar

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1909 Burdett Ave, Troy, NY 12180

EDUCATION & HONORS

Rensselaer Polytechnic Institute – Troy, NY

May 2027

Bachelor of Science in Computer Science, Masters in Artificial Intelligence

GPA: 3.48 / 4.00

Majors: Computer Science, Information Technology and Web Sciences (ITWS) | **Minor:** Cognitive Science of Artificial Intelligence

- **CS Courses:** Intro to AI, Operating Systems, Programming Languages, Database Systems, Intro to Logic-Based AI, Principles of Software, Graph Mining, Introduction to Algorithms, Foundations of Computer Science, Computer Organization, Data structures, Minds and Machines
- **ITWS Courses:** Managing IT Resources, Web Sci Dev, Info Sys Security, Modern Binary Exploitation, Web Sys Dev, Foundations of Human Computer Interaction Usability (HCI)

AI Courses: Samsung AI Innovation Campus, IBM and Purdue Professional Certificate in AI and Machine Learning

PROFESSIONAL EXPERIENCE

Advanced Manufacturing Technologies Laboratory Manager – Troy, NY

September 2023 – May 2025

Laboratory Director & Research Lead

- Spearheaded the establishment and expansion of RPI's advanced manufacturing facility, scaling operations from initial concept to a comprehensive lab network managing professional-grade equipment including: Peopoly Phenom L (MSLA), Prusa i3 MK3S+ series (4 units), Bambu Lab X1C (3 units), Neptune 3 Pro (16 units), and more across four locations.
- Pioneered the integration of advanced resin printing technologies, implementing Formlabs Form 3+ and Elegoo Saturn 2 8K systems to enable high-precision prototyping capabilities (sub-35-micron resolution) for academic research and departmental projects
- Leading research initiatives in experimental materials processing, developing protocols for ABS, Tullomer, and metallic composite printing, including custom hardware modifications for specialized material extrusion
- Manage end-to-end laboratory operations including strategic planning, equipment procurement, maintenance protocols, and cross-departmental collaboration for research projects and academic support

ACWA Power IT Intern (Summer 2024) – Dubai, UAE

June 2024 – August 2024

IT Strategy Intern

- Developed comprehensive workshop content for enterprise-wide AI initiatives, collaborating with industry expert Matthew Blakemore to design educational materials focusing on AI applications and impacts specific to ACWA Power's operations
- Led the design and content development of a UI/UX training program, creating workshop materials and a requirements-focused recap session that synthesized key principles of user interface design for enterprise applications
- Created three company-wide infographic campaigns using Figma and Canva, effectively communicating ACWA Power's software infrastructure, safety protocols, and AI initiatives to 3000+ employees across multiple regions
- Participated in pre-implementation planning for enterprise-scale platform migrations, including Change Management, Opportunity Management, and Document Management systems, gaining exposure to large-scale digital transformation processes
- Engineered a Python-based text analysis solution implementing the Levenshtein distance algorithm to reconcile 150+ mismatched equipment codes across legacy databases, automating what would have been a manual reconciliation process

Computer Organization Course Assistant (Spring, Fall 2024 and Spring, Fall 2025) – Troy, NY

January 2024 – Present

Mentor

- Provide technical instruction and mentorship to 120+ CS students, establishing a support system for structured labs and on-demand assistance
- Deliver expert guidance on complex topics including C programming, MIPS Assembly, memory management, processor architecture, and hardware-software interfaces, resulting in measurable improvements in student grades and project outcomes
- Evaluated technical assignments, identifying common misconceptions and developing targeted strategies reducing course dropout rates

PROJECTS

Discovr and Projects website – Troy, NY

August 2023 – May 2025

Web Developer

- **Discovr (Travel Platform):** Architected and built a comprehensive travel recommendation engine that matched users with destinations based on a multi-variable preference algorithm analyzing climate, activities, budget, and cultural interests
 - Implemented the solution using PHP, MySQL, JavaScript, and CSS with responsive design principles for cross-device compatibility
- **Insync (Student Social Platform):** Created a full-featured social connection platform for first-year students, enabling seamless integration into campus life through personalized event recommendations and interest-based networking
 - Integrated Firebase API to implement real-time messaging, event calendar synchronization, and secure user authentication systems
- **SyncBoard (LMS Platform):** Built a platform for students and teachers to be able to communicate, share documents and links, plan events using a common calendar, view group member availability, and create groups for classroom use
 - Used Figma, React, MongoDB, Express, Node.js, Firebase API with focus on Cybersecurity, Ease of use, and Mobile/Laptop functionality

Rensselaer Center for Open Source (RCOS) – Troy, NY

January 2023 – May 2023

Head Documentarian - LEGUP (Logic Engine for Grid-Using Puzzles)

- Collaborated with a team of over 20 students through GitHub to develop and improve LEGUP
- Improved and updated the user interface, fixed bugs (Java), added improvements, revitalized and maintained the documentation on GitHub by editing 24 pages, including installation, program tutorials, troubleshooting, and complex logic rules for five distinct puzzle types
- Implemented LEGUP as an essential tool in the Intro to Logic course, benefitting 50+ students per semester

SKILLS & INTERESTS

Skills: Python | React | Node.js | Go | C++ | JavaScript | C | PHP | MySQL | MIPS Assembly/x86 | VS Code | Google suite | Microsoft Office

Languages: English, Hindi, Marathi

Interests: Cycling | Right to repair | Origami | Concorde | SR-71 | Koenigsegg