Rohit Biswas

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Education

Columbia University — New York, NY
Bachelor of Science in Computer Science — *Expected May 2027*
Hackathon wins: DivHacks 2025 (MLH Award), MakeCU 2025 (3rd Place)

Experience

Mutual of Omaha — Jun 2026 – Aug 2026
Software Engineer Intern — *Omaha, NE*

- Incoming Software Engineer Intern

Columbia Technology Ventures — Oct 2025 – Present
Systems Engineer — *New York, NY*

- Engineered workstation provisioning across 100+ machines with Bash/PowerShell deployment pipelines, scheduled validation jobs, and rollback mechanisms, cutting manual setup time by 40%
- Implemented centralized log monitoring with automated alert routing for 500+ daily events, reducing incident response time from 25 min to 10 min average
- Designed BIOS/software deployment system with staged weekly rollouts and automated smoke tests, eliminating cross-machine configuration drift

NYCHA — Jun 2025 – Aug 2025
Cybersecurity Intern — *New York, NY*

- Triaged 20+ security incidents in Splunk ES, building reusable SPL query templates that cut investigation time by 40% and became team standard
- Identified and tracked remediation for 50+ vulnerabilities across external web applications using Veracode DAST, reducing open findings by 30% in 6 weeks

Fordham University — May 2023 – Jun 2025
IT Engineer — *Bronx, NY*

- Streamlined enterprise software deployment across 200+ workstations using PowerShell, Python, and Bash, reducing deployment time by 70%
- Integrated PowerFAIDS, Crowdstrike, and LANDESK platforms via REST APIs and containerized services for cross-platform data synchronization

Projects

Stemme.Study | *MLH Award Winner* | Python, React, Node.js, Gemini API, ElevenLabs — Devpost | GitHub

- Developed real-time speech therapy tool processing audio streams through Web Speech API to Gemini for response generation to ElevenLabs TTS, achieving sub-500ms end-to-end latency
- Architected React/Express stack with WebSocket connections for live transcription feedback and session persistence

AutoDump | *3rd Place, MakeCU* | Raspberry Pi, OpenCV, Python, C++, Arduino — Devpost | GitHub

- Engineered autonomous rover with OpenCV ArUco marker detection for vision-based docking (±2cm accuracy) and ultrasonic proximity sensing for obstacle avoidance
- Implemented servo-controlled dump mechanism with Arduino/ROBOTIS integration and Python state machine for autonomous operation cycle

HTTP/1.0 Web Server | C, POSIX Sockets, HTTP/1.0 — GitHub

- Built multithreaded C web server handling concurrent connections via POSIX sockets with proper request parsing, MIME type detection, and path traversal protection
- Integrated persistent TCP backend connection for dynamic database lookups with connection pooling

R2D3 | C++, Arduino, SolidWorks — GitHub

- Designed dual-axis solar tracking system using Arduino, servos, and photovoltaic sensors with custom 3D-printed mounts for optimized solar panel positioning

Technical Skills

Languages: C, C++, Python, JavaScript/TypeScript, SQL (PostgreSQL), Java, HTML/CSS
Web & APIs: React, Node.js, Express, FastAPI, Flask, REST APIs, WebSockets
Systems & Infrastructure: Linux/UNIX, Docker, Kubernetes, Bash, PowerShell, CI/CD, Splunk, Git
Hardware/CV: OpenCV, Arduino, Raspberry Pi, sensor integration