

Rojan Upreti

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Education

William Paterson University

Bachelor of Science, Computer Science

Wayne NJ, USA

Patent

- **Cryptographic Enclave AI Pipeline:** Provisional Patent Filing No: 64/085,842 · Filed Jun 9, 2026

Experience

Medlock

Nov 2025 - Present

AI Engineer

- Built USA's first HIPAA-compliant AI Inference engine on AWS EC2 Ubuntu instances, hosting Kimi LLMs with Langchain, AWS Nitro Enclaves for isolated computation and PostgreSQL with cryptographic logging for compliance auditing.
- Building an automated HIPAA 45 CFR §164 Compliance monitoring system, an integrated dashboard connected with EHR and Cloud Service, identifying PHI leakage & HIPAA violations, mitigating compliance risk with ML engine and AI-driven remediation recommendation.
- Fine-tuning Kimi K2 LLM on healthcare-specific datasets using NVIDIA GPUs (AWS g6e instances) for accuracy. Won Tech Innovation Day @ WPUNJ for AI architecture; in talk with NJEDA for funding

TaxCurb System

Nov 2025 - Apr 2026

Founding Software Engineer

- Built tax filing platform for non-resident migrants to file IRS tax return, SAAS to file tax return and amend, translating user input into compliant tax logic, perform validation
- Implemented production backend architecture using Node.js, Express, and Firebase Admin SDK with server-side credential isolation, HTTP-only cookie authentication, hardened security headers (Helmet), strict CORS, rate limiting, and input sanitization; eliminated XSS and injection vulnerabilities while maintaining 99.8% uptime and sub-100ms response times.
- Engineered automated eligibility and deduction workflows using rule-based logic and AI-assisted inference; tracked system output accuracy and automation effectiveness, enabling real-time compliance validation and reducing manual review overhead by 40%.

Atlantic Health Systems

Jun 2025 - Aug 2025

ISS Summer Intern

- Configured and troubleshot CrowdStrike clinical endpoints using Active Directory and remote diagnostics; identified configuration drift and security misconfigurations to support team's proactive endpoint management strategy.
- Managed asset provisioning and user access through Active Directory and ITSM software, performed remote diagnostics and configuration, and ran SQL queries to generate system and compliance reports for enterprise devices.
- Performed device lifecycle tasks. Worked with Imprivata OneSign, Launchpad, Active Directory, Intunes and Apple Business Manager, and ensured mobile EHR access, including Rover & Haiku.

Jodhpuri USA

Jan 2023 - May 2026

Operation Manager

- Analyzed operational data (ERP Crystal Reports); identified trends and routing inefficiencies; optimized fulfillment processes improving delivery performance by 18% and reducing costs by \$40K+ annually.
- Designed fulfillment workflows connecting ERP and logistics partners; monitored system performance and identified anomalies; reconciled datasets and coordinated resolution to ensure SLA compliance and uptime.
- Coordinated 50+ vendor and 3PL transactions; administered e-commerce platforms (Amazon, Faire, Shopify); monitored performance metrics and reconciled data to optimize operations and ensure accuracy at scale.

Projects

Passaic360 [passaic360.app](#)

Feb 2026

- Built web and mobile platform serving 78,000+ SNAP recipients; architected multi-tier role-based access control with JWT middleware, row-level security, and audit logging to enforce least-privilege access and ensure compliance across all workflows.
- Implemented AI-assisted anomaly detection across timesheet submissions to identify fraudulent claims; analyzed patterns and built automated prevention workflows projected to reduce fraud and save Passaic County \$2M+ annually.

Exo-Explorer [NASA](#)

2024

- Built interactive web platform visualizing 3D exoplanet data; integrated NASA APIs and OpenAI chatbot to deliver real-time AI-generated astronomy insights; optimized performance for responsive user experience across datasets
- Implemented AI-powered chatbot for real-time data interpretation; earned global nomination at NASA Space Apps Challenge demonstrating innovative approach to data-driven educational platform design.

DataSweepr

Jun 2025

- Built a Chrome extension and dashboard to remove users' digital blueprints by detecting and deleting cookie-based tracking data in real time, secured with JWT sessions, TLS encryption, and ngrok-based Docker tunnels
- Built a Firebase + Firestore backend integrated with n8n, OpenAI, and Perplexity AI to automate GDPR/CCPA deletion requests, locate webmaster contacts, and update request statuses, reducing manual work by 90%

Skills

- **Tech Stack:** C++, Python, SQL, Bootstrap, RestApi, TypeScript, GraphQL, Node.js, HTML/CSS
- **Technical Skills:** System Design, Data Analysis, API Architecture, Performance Monitoring, Risk Identification, Process Automation, Artificial Intelligence, Excel, Networking Technology, Agile, ITSM, Project Management, Terraform, SDLC, Linux, LLMs, FineTuning, CI/CD
- **Tools:** Confluence, Jenkins, Harness, Hugging face, SalesForce, MS Office, ServiceNow, Prometheus, Langchain, Grafana, Playwright, Kafka, Jira, XAMPP, Slack, GitHub, AWS Lambda, Oracle, RDBMS, AWS, Firebase, PostgreSQL, Postman