ANANYA ASTHANA

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PROFESSIONAL SUMMARY

Focused and fast-learning Software Engineer with 3.5 years of work experience in the IT industry, on Backend Development, Web Development, DevOps, AI, Cloud - security and automation, seeking high-impact, high-value, innovative opportunities.

ACADEMIC QUALIFICATION

Northeastern University, Boston, MA   **September 2023 – May 2025**
Khoury College of Computer Sciences   GPA: 3.83/4.0
Master of Science in Computer Science

SRM Institute of Science and Technology, Chennai, India   **August 2016 – May 2020**
Bachelor of Technology, Computer Science and Engineering   CGPA: 8.51/ 10

TECHNICAL SKILLS

Languages: Python, Java, PowerShell, PHP, C, C++, C#
Database Management Systems: SQL, MySQL, MongoDB, PostgreSQL
Web Technologies: HTML, JavaScript, TypeScript, React.js, Node.js, CSS, Bootstrap
Frameworks/ Libraries: FastAPI, FlaskAPI, Swing, Zend, OpenCV, Pandas, Numpy, PyTorch, Ollama, unittest, WordPress
Developer Tools: Git, Docker, Terraform, PowerBI, Prisma, Dynatrace, GitLab, ServiceNow, Jenkins, Kubernetes, Splunk, Latex
Cloud Computing: AWS, Azure, GCP, Boto3 SDK, AWS CDK, CIS NIST CSA-CCM frameworks
Certifications: AWS Certified Security - Specialty, AWS Certified Cloud Practitioner, Microsoft Azure Fundamentals, AWS Cloud Agnostic Audit Certification, Palo Alto Networks System Engineer: Prisma Cloud Associate

WORK EXPERIENCE

Amazon Robotics   **July 2024 – December 2024**
Software Development Engineer Co-Op   North Reading, MA, USA

- Developed the AR Resource Management (ARRM) Historical Insights Toolkit, a reusable framework to automate metric generation from drive unit and fulfillment center data, eliminating rescripting and used by 5+ engineering teams to drive feature updates.
- Reduced architecture setup time by 80% via programatic automation using the **TypeScript**-based **AWS Cloud Development Kit**, provisioning Python **Lambda** for query execution, **Athena** for data extraction, **S3** for storage, **IAM** roles for least privilege, **Cloud-Watch** for dashboarding, and **EventBridge** for periodic execution. Compiled an extensive development guide for future scalability.
- Performed modular unit testing using Python **unittest** with **mocking** to improve code quality, correctness, edge and test case coverage.

KPMG India   **January 2020 – July 2023**
Software Development Engineer   Bengaluru, India

- Led the development of a **Python** Cloud Security Posture Management tool using **Flask** REST APIs, **PowerShell, cloud SDKs (AWS, Azure, GCP)**, with a **MySQL** database, deployed for 10+ Fortune 500 clients, saving 200+ hours/month in manual cloud audit effort.
- Developed 13 Azure Cloud Audit bots for KPMG's Intelligent Automation Platform, used globally by 8 KPMG member firms.
- Spearheaded cloud pipeline automation using **Terraform, Python, PowerShell**, and **Bash**, resolving 120+ IAM, IaC, Lambda tickets, reducing issue resolution time by 50% and cloud operation costs by 15%; containerized the solution using **Docker** and Az containers.
- Built a scalable **PHP Zend**-based Third-Party Risk Management solution with **MySQL**, **React.js**, reducing evaluation time from 2+ days to 3 hours and improving detection accuracy by 25% using dynamic risk scoring, with visual insights using **PowerBI** and **D3.js**.
- Deployed automated **CI/CD** pipeline with **Jenkins**, **GitLab**, **K8s** and **Splunk** for monitoring, saving effort of 3+ resources weekly.

PROJECTS

SHEdule: Cycle-aware smart scheduling for balanced living | Github Project Link | Demo Video   **March 2025**
Built with **React.js**, **Node.js**, **Express.js**, and **PostgreSQL**, integrating **Ollama Mistral** and **Google TTS** to schedule work-life-health balanced calendars. Uses a personal AI assistant to recommend alternative tasks based on bodily cycle phases that affect physiology.

HireU: AI-Powered Hiring and Grant Eligibility Assistant | Devpost Project Link | Demo Video   **February 2025**
'Best use of GenAI' award at CivicHack '25. Created a **React.js** Frontend, **Python FastAPI** Backend, **MongoDB** Database and **Ollama LLM** server for context-based matching of small businesses with suitable candidates and 60% more eligible Federal and State grants.

EduNavigate: Learning Management System | Project Deployment Link   **May 2024**
Robust single-page application for the management of courses, modules, grades, assignments and quizzes, using **React.js**. Engineered a RESTful backend using **Node.js, Express.js**, with state management using **Redux** and database management using **MongoDB**.

Image Manipulation and Enhancement Software using Java | Github Project Link   **November 2023**
Performs image manipulation functions including compress, blur, sharpen, levels adjustment etc., and produces histograms, displayed on an interactive **Java Swing GUI**. Implemented the Command Design Pattern and MVC architecture for code efficiency.

PAPER PUBLICATIONS

1. Enhanced Framework for Visual Attention on Human Face using Artificial Intelligence. 2. Automated Energy Saving System using IoT with PIR Sensors. 3. Paper Presentation of 'Diabetes Risk Analysis Using Data Mining and Machine Learning'