

Pratyusha Kumar

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EDUCATION

B.S. Computer Science	3.75 GPA
Arizona State University, Tempe, AZ	
M.S. Robotics and Autonomous Systems (AI)	Dec 2026
Arizona State University, Tempe, AZ	

TECHNICAL SKILLS

Programming Languages: Python, C++, Java, MATLAB, MySQL, HTML, CSS, JavaScript, sqlite3, XML

Framework/Libraries: React.JS, Django, Flask, JavaFX, JUnit, Scapy, Pandas, .NET, PyTorch, Tensorflow

Tools: Microsoft Office, Power BI, Microsoft Azure, Git, Jira, Alteryx, Azure DevOps, Taiga, AWS (EC2, S3, SQS, Lambda)

PROFESSIONAL EXPERIENCE

Tech Mahindra, New Delhi, India – Trainee	Apr 2023 – Jun 2023
<ul style="list-style-type: none">Practiced using external databases to collect form data and perform basic visual analysisCreated form prototypes for client applications and upskilled front-end skills by using React	

PROJECTS

Finding Potential Joins in Datasets using LLMs	Feb 2025 - Dec 2025
<ul style="list-style-type: none">Collaborated with a team of 3 engineers to build a column-level embedding pipeline for structured datasetsStored embeddings in an ANN index to enable fast semantic column retrieval from natural-language queriesImplemented LLM-based re-ranking to refine top similar columns identified by embedding similarityEvaluated multiple embedding models, ANN index formats, and LLMs to identify the most accurate and efficient pipeline configuration	
ARED - AI Agent	Feb 2025 - Dec 2025
<ul style="list-style-type: none">Designed a custom preprocessing workflow that reduced compute usage by 30%, achieving 5.3s avg response timesBuilt a multi-model AI architecture leveraging lightweight classification and NER models to gate LLM invocation, improving overall efficiency and end-to-end latencyDeployed the fully containerized, local AI infrastructure using K3s, hosting model weights and inference servers on-device to support business and customer-facing interactions (function calling, translation, and STT) on an edge system	
SASE Website (Webmaster)	Dec 2023 - Aug 2024
<ul style="list-style-type: none">Trained and managed a team of 4 developers to update the existing site and its featuresCreated a detailed tracking system that tracks student details, emails, attendance with the use of Django and PythonMade the website more accessible by adding non-technical webpages for various functions and auto-analysisIncreased efficiency by 15% along with 160 students and an average monthly traffic of 3500+ users using the website to sign in to events and for event information	
Country Club Management	Jan 2025 - May 2025
<ul style="list-style-type: none">Collaborated with a team of 3 developers to create a country club management using .NET and XML file storageStored user, admin, and staff data using XML and implemented password encryption through SHA256Learned how to debug system wide issues and internal server errors and crashes for AWS deployment	
Bridge2Africa E-Learning Lab	Jan 2023 - Mar 2024
<ul style="list-style-type: none">Led a team of engineers to document and modernize the website for our client (Bridge2Africa) by updating the UI/UXDeveloped a shopping page for the Bridge2Africa along with another engineer by using Shopify, and hosted the website on Digital Ocean at elearning-lab.orgLearned how to create an efficient work environment for a team, assign tasks and responsibilities that lead to productive outcomes, and clearly communicate with a client	

EXTRACURRICULAR ACTIVITIES

Society of Asian Scientists and Engineers, ASU	Aug 2024 - Present
<i>Director of Internal Affairs, Vice President</i>	
<ul style="list-style-type: none">Act as a leader for a team of 9 students to host social, and professional events to student experiencePerform duties such as presenting slides, reviewing resumes, conducting mock interviews, and conflict managementEngage with industry representatives and host industry events for ASU students	