Pooja Patel

patelpoojajune@gmail.com | https://www.linkedin.com/in/pooojapatel/ | github.com/poojadotdev | LA, CA

EDUCATION

University of Southern California — Los Angeles, CA
Master of Science in Computer Science (GPA: 3.52/4.0) — *June. 2024 – Dec 2025*

MKSSS's Cummins College of Engineering for Women — Pune, INDIA
Bachelor of Technology in Computer Engineering — *Aug. 2017 – July 2021*

EXPERIENCE

Software Engineering Intern - Amazon Web Services — May 2025 – Aug 2025
AWS, Typescript, Java, DynamoDB — *Seattle, WA*

- Built automation tools in TypeScript and Java that enabled engineers to deprecate controls with a single workflow, **saving two weeks of manual work** per deprecation saving thousands of dollars in dev time.
- Designed AWS Step Function state machines to orchestrate deprecation and generate detailed execution reports, **improving on-call transparency** for disabled controls and affected customers
- Developed an asynchronous processing pipeline with SQS and SNS to batch-control disabling and provide real-time workflow updates

Software Engineer - Microsoft — July 2021 – May 2024
C#, .NET, Python, Kusto, Microsoft Azure — *Hyderabad, India*

- Drove a multi-team initiative to modernize the Virtual File System monorepo, improving productivity for **8k+ developers** and standardizing storage of files up to **2 TB**; delivered a robust logging platform for cross-team observability and debugging.
- Optimized Bing Search History service, reducing query latency by **over 87%** (2s to 250ms), directly enhancing user experience and reducing cloud compute costs.
- Led deprecation and cleanup of legacy repositories, **saving 2 TB** of storage and lowering annual Azure DevOps spend, while minimizing security risks from abandoned assets.
- Architected and delivered Insights Dashboards for organization-wide metrics, processing **400M+ records** monthly, driving data-driven decisions at the CVP and executive level.

Project Intern - Optimum Data Analytics — Sep. 2020 – June 2021
HTML, CSS, JavaScript, NLP, Python — *Remote*

- Co-led development of an enterprise-grade Named Entity Recognition framework, accelerating clients' ability to extract actionable insights from large, heterogeneous datasets.
- Championed the adoption of a novel two-step OCR and annotation pipeline, increasing model flexibility and reducing manual labeling costs by 30%.
- Co-authored publications (Springer, IEEE), highlighting technical innovations and thought leadership within NLP research.

Technology Analyst Intern - Deutsche Bank — June 2020 – June 2020
SQL, Spark, Hadoop — *Pune, India*

- Delivered a Spark SQL Statement Analyzer to provide critical visibility into data lineage, improving auditing efficiency and regulatory compliance.
- Accelerated data pipeline deployment by setting up a new Hadoop cluster and integrating **Spline Web UI**, enabling interactive lineage tracing and reducing debugging time.

PROJECTS

Community Volunteering iOS App | *iOS, Swift* — Jan 2025 – Jan 2025

- Built an iOS mobile application as a part of the **Impact Labs fellowship** program which allows Non profit organizations to create events on the app for which they require volunteers and volunteers can then sign up for these events and will be receiving timely reminders for same.

Weather Search Website and iOS App | *NodeJS, Typescript, Angular, iOS, Swift* — Nov 2024 – Dec 2024

- Individually created a website using Angular and Typescript frontend that fetches weather from tomorrow.io API in a backend written in NodeJS and has features like adding to favorites (Mongodb), autocomplete in search for city name (Google Places API). Created an iOS app with similar specifications.

Job Search Portal for Blue Collar Workers | *Python, Flask, HTML, CSS*   Feb 2021 – Feb 2021
- Solo Developed a location-based job search portal tailored to Indian blue-collar workers, highlighting daily wages to promote fair labor practices. Built the end-to-end solution in Python and Flask within a week and presented it to a Microsoft evaluator during the **Engage Hackathon**.

Arbitrage Recommendation System | *Python, HTML, CSS, Django, Yahoo Finance*   March 2020 – May 2020
- Built an arbitrage recommendation system to identify price differences between BSE and NSE stocks for NIFTY 50 as part of the **Citi Bridge Program**, where I was selected among the top 18 out of 250 students. Improved API latency by 2 seconds and enhanced the website's user experience while working in a team of 5 under a Citi Bank mentor.

Volunteering/Leadership

- **Impact Labs Fellow 2025** - As a fellow, I built a community volunteering app that allows organizations and volunteers to create events and volunteer at local events.

- **Viterbi Graduate Student Association** - Selected to be the DEIA Senator for VGSA at USC, where I am responsible for ensuring inclusion and accessibility for all events by VGSA.

- Section Leader for Stanford's **Code in Place**, **Mentor** at programs like Guidancescape, The Loop, Summer of Learning, Samyak Drishti Foundation, Brain Dates during my undergraduate years.

- Volunteered at multiple organizations like GiftAbled, the literacy project, Grace Cancer Foundation, CRY, Bangalore School Sports foundation during my Tenure at Microsoft where my **volunteer time was matched** for an amount and donated to the respective organizations where I volunteered.

- **Microsoft Learn Student Ambassador** from july 2020 to June 2021 where I delivered a webinar to teach Python programming to freshmen and sophomore students.

Research/Publications

- Worked on the research topic of "Examining Speaker Bias in LLM Based on Prompts in African American Vernacular English vs. Standard American English" as a part of my Advanced NLP class group project

- Co-Author in "Simple Text Annotation Tool (STAT)" in ICT4SD conference (Springer)

- Co-Author in "Generalized Named Entity Recognition Framework" in ASAINCON (IEEE)

- Doodling with Neural Networks – Google Quick Draw – Seminar presented at CS department level

Awards

- Spot Award for exceptional work – Microsoft

- Grace Hopper Celebration, India Scholar 2020