Dhrumeen Kishor Patel

https://www.linkedin.com/in/dhrumeenpatel/ | github.com/dhrp01

5+ years in Software | Cloud Solutions | React & FastAPI | Data Engineering

EDUCATION

MS, Computer Science, University of Massachusetts Amherst, MA — CGPA: 3.8/4 | May 2025

Bachelors, Electronics and Telecommunications, Maharashtra Institute of Technology, Pune, India — CGPA: 8.7/10 | May 2019

SKILLS

Languages: python, C, C++, JavaScript, TypeScript, Shell Scripting, Bash Scripting, R, SQL

Technologies: git, docker, AWS, nodejs, React, GCP, Azure, Jenkins, Django, Postgres, MongoDB, numpy, pandas

Framework: boto3, pytest, unitest, spaCy, playwright, React-Aria, pydantic, zod, pytorch

Software & OS: Jira, Confluence, GitHub, Bitbucket, linux, macOS, windows

Coursework: Data Structures and Algorithms (DSA), System Programming and Operating Systems, Computer Network and Security, Object Oriented Programming (OOP), Reinforcement Learning (RL), Applied Methods for Data Science, Systems for Data Science, Algorithms for Data Science, Advance Machine Learning (ML), Advance Natural Language Processing (NLP)

WORK EXPERIENCE

Software Engineering Intern — June 2019 - Current

Nasuni Corporation | Boston

- Developed **secure, scalable APIs** using **FastAPI and Pydantic** models for strict type-checking with a response time of less than 10ms.
- Designed and developed the User Account page using Figma's mock-up from ground up in **ReactJS**, integrating valid user-email check, **strong password validation** check and **caching using TanStack Router** reducing refresh query hits by 90%.
- Implemented **reusable UI custom components** using **Tailwind UI** and **React-Aria** components, optimizing **theme consistency and scalability** across the application.
- Responsible for **writing unit-tests** for backend and frontend using playwright, unitest and Jest ensuring high code quality and reliability, reducing bugs by 25%.

Senior Software Development Engineer (SDE) — June 2019 - August 2023

Agiliad Technologies Pvt. Ltd. | Pune

- Designed **REST APIs** using **Django** and **Swagger UI** for virtual machine and product deployment, seamlessly interfacing with **Postgres database**, achieving a **30% cost saving** through data analysis and expiration token implementation.
- Architected **AWS S3** and **E2 instance** command-line interaction tool along with a reliable **CI/CD pipeline**, achieving a significant **50% reduction in deployment failures**; enhanced **LDAP reliability to 80%**, resolving server and client issues.
- Facilitated and **led over 10 design meetings** with **cross-functional teams**, fostering **collaboration** and **innovation**; successfully **mentored 5 junior** engineers, resulting in a **27% improvement** in their project completion times.
- Programmed a robust logic system in **C++**, cross-referencing files against a localized r**ansomware database**, enhancing file protection and enabled user notification, identifying over **5000+ ransomware extensions**.

PROJECTS

News Nugget | End-to-End Application, UMass

- **Created real-time** news aggregation and summarization platform, delivering curated news notification based on user preferences.
- **Engineered a distributed Kafka**-based architecture to fetch and summarize 100+ latest news article using **fine-tuned Google Flan-T5** model and leveraging **PySpark for parallel processing**, reducing summarization time by 32%.
- **Built user-friendly UI** for subscription management and integrated **Docker for system scalability**, enabling seamless deployment and replication across multiple environments.

Recurring Self-Consistent Chain-of-Thoughts | NLP Research Project, UMass

- Conceptualized an innovative approach reducing computational overhead and **enhancing self-consistency and chain-of-thoughts in LLMs by developing a novel "Recurring Elimination"** strategy while maintaining accuracy in complex reasoning tasks.
- Implemented **evaluation pipelines** for large language models, such as **GPT-2 Large, Gemma-2B, and Gemma-7B** analyzing model performance across parameters and sampling strategies, increasing model accuracy with fewer sampled outputs.
- Led comprehensive **error analysis**, to identify key inconsistencies in model outputs, devising an iterative refinement system that improved correct answer consistency after multiple iterations.

CERTIFICATIONS & RECOGNITIONS

- Machine Learning; Stanford Online • SQL for Data Science; UCDavis • Golden Mettle Award; Agiliad, 2020 • Team Impact Award; Agiliad, 2019