Preeti De Maurya

Computer Science PhD Student, New Mexico State University

CONTACT

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OBJECTIVE

Computer Science PhD Student, pursuing research in Human Computer Interaction with focus on developing inclusive and ethical collaborative design tools and mediums, with 4.5 years of professional experience in IT and Engineering industries and 3 years of internships and research assistantship experience in software development, user studies, and participatory design methodology. Seeking Internship opportunities in relevant field.

SKILLS

Programming Languages	Experience
Java	8 Years
Python	6 Years
GO	2 Years
Groovy	3 Years
Java Script	8 Years
VueJS, ReactJS, Node	3 Years

Databases	
MySQL	6 Years
Oracle	8 Years
Postgres	5 Years
Redis	5 Years
Dgraph (GraphQL)	5 Years
NoSQL/MongoDB	5 Years
Elasticsearch	5 Years
jQuery	5 Years

Technologies	
REST/SOAP	8 Years
gPRC	2 Years
Kafka	3 Years
Django	2 Years
Flask	2 Years
CircleCI	2 Years
IoT/MQTT	2 Years

CI/CD	
CircleCI	2 Years
Git	11 Years
Docker/ Kubernetes	4 Years

Design Methodology	
Participatory Design	2 Years
Ethnography Study	2 Years

SUMMARY

I am seeking a software engineer opportunity that offers professional challenges utilizing interpersonal skills, excellent time management, troubleshooting and problem-solving skills. My career goals are centered on advancing research and development that emphasizes on design of inclusive and scalable solutions.

My expertise spans software development (full stack), API development, web design, qualitative data analysis, and IoT development. I am passionate about leveraging these skills to create user-centered solutions that are both innovative and responsible.

ACADEMIC PROJECTS AND PROFESSIONAL EXPERIENCES

Research Assistant

Plex Lab — 12/2022 – Present — Las Cruces, USA

- Implementing infrastructure setup, used Kubernetes and Docker to ensure scalability and efficient deployment.
- Conducting research on disaster management and rescue operations, focusing on the visualization of GIS data layers using self-hosted vector tiles and MapTiler, and JavaScript based collaborative spaces to enhance decision-making processes.
- Led a qualitative study on mixed reality (MR) applications at a Hispanic Serving Institution, examining their impact on minority students from diverse cultural backgrounds
- Authored and submitted paper to CSCW 2025 on Ethics in Participatory Design with Vulnerable Populations, exploring ethical frameworks in design research.

Graduate Assistant Researcher

FinTech Lab — 07/2022 – 11/2022 — Las Cruces, USA

- Worked as a full stack developer for a Real Estate Prices forecasting application.
- Used ARIMA models for Machine Learning in Python
- Worked on ReactJS for GUI, Django for Backend and MySQL as Database.

Research Assistant

New Mexico State University — 08/2021 – 07/2022 — Las Cruces, USA

- Independently developed and designed Hack the Land Cover (https://land-cover-nmsu.netlify.app/) project funded by NASA EPSCoR.
- Used Vue.Js, Canvas UI, and MongoDB to store the image labels provided by volunteers through Hack the Land Cover Website.
- Applied Image Segmentation and Image Recognition ML algorithms to recognize the land cover types.

Lead Software Engineer

Infinite Devices GmbH — 02/2020 – 07/2021 — Magdeburg, Germany

- Implemented as a backend developer for development of IoT application Infinimesh.
- Developed library for supporting MQTTv5 protocol for the message transfer in proximity sensors and Infinimesh.
- Used technologies like Golang, Redis, Kafka, MQTTv3, Dgraph, gRPC and Wireshark.
- Worked on developing CI/CD pipelines using github webhooks, circleCI, docker containers, and Kubernetes.

Software Engineer

IAV GmbH — 07/2019 – 06/2020 — Gifhorn, Germany

- Worked on implementing Time Sensitive Networking (Ethernet & CAN) Diagnostics & Network Protocols.
- Used CANoE and C# for writing the test scripts for diagnostics.

Research Internship/Thesis

IAV GmbH — 07/2018 – 12/2019 — Gifhorn, Germany

- Applied Machine Learning algorithms to find correlation in non-linear parameters causing maximum emissions by combustion engine tested in real time environment.
- Used Spider, PyCharm and Machine Learning clustering algorithms.

Software Developer

Syntel Ltd. — 09/2013 – 01/2016 — Pune, India

- Worked as a full stack developer and SDET for global clients like AMEX and FedEx.
- Used Java, Groovy, Java Script, Oracle, MySQL

EDUCATION

Degree	Specialization	Coursework Focus	University	Location	Tenure
PhD	Computer Science	HCI, AI/ML, Data Science, Computer Vision	New Mexico State University	Las Cruces, NM, USA	2020 - Present
Masters in science (MS)	Automotive Software Engineering	Software Engineering, Data Science, IoT, Distributed computing	Technische Universität Chemnitz	Magdeburg, Germany	2017 - 2019
Bachelors in science (BSc)	Computer Science	DSA, Software and Web development, DBMS, Networking	Mulund College of Commerce	Mumbai, India	2010 – 2013

PUBLICATIONS

1. Preeti De Maurya, Redwan Ul Haque Choyon,Bill Hamilton. “Survey of Ethical Practices for Participatory Design Involving Vulnerable Populations”, CSCW 2025 (In Review)
2. Preeti De Maurya, Redwan Ul Haque Choyon, Theodore Platt, Bill Hamilton, Hilda Cecilia, Contreras Aguirre, Luis Rodolfo Garcia Carrillo, “Fostering an Inclusive Community A mong Electrical and Computer Engineering Students with Mixed-Reality Technologies at a Hispanic-Serving Institution”, ASEE CoNECD 2025 (Accepted)
3. Omid Jafari, Preeti Maurya, Khandker Mushfiqul Islam, and Parth Nagarkar. “Optimizing Fair Approximate Nearest Neighbor Searches using Threaded B+-Trees.” in 14th Intern ational Conference on Similarity Search and Applications (SISAP 2021), 2021.
4. Nada Ibrahim, Preeti Maurya, Omid Jafari, and Parth Nagarkar. “A Survey of Performance Optimization in Neural Network-Based Video Analytics Systems.” in Arxiv, 2021.
5. Omid Jafari, Preeti Maurya, Parth Nagarkar, Khandker Mushfiqul Islam, and Chidambaram Crushev . “A Survey on Locality Sensitive Hashing Algorithms and their Applications.” in Arxiv, 2021.
6. Maurya, P., Jafari, O., Thatte, B. et al. Building a comprehensive NER model for Satellite Domain. SN COMPUT. SCI. 3, 199 (2022). https://doi.org/10.1007/s42979-022-01085-1

WORKSHOPS

De Maurya, P., Ul Haq Choyon, R., Platt, T., Luis Rodolfo Garcia Carillo, Hilda Cecilia Contreras Aguirre, Taylor, M., & Hamilton, B. 2024. Designing Mixed Reality for Social Learning in Wisdom Communities at Hispanic Serving Institutions. Presented at CHI 2024 Workshop on Designing Inclusive Future Augmented Realities.