

Payal Mangesh Mehta

(919) 559 6111 | mehta.payal2000@gmail.com | [linkedin/payal-mehta18](https://www.linkedin.com/in/payal-mehta18) | [github/m-payal](https://github.com/m-payal)

Education

North Carolina State University , Raleigh, NC <i>Master of Computer Science</i> Coursework: Human-Computer Interaction (HCI), Software Engineering, Program-Centered Design, Neural Networks, Database Management, Data Science, Software Security, Program-Centered User Design	<i>Aug 2023 - May 2025</i> GPA: 3.5
MKSSS Cummins College of Engineering , Pune, India <i>Bachelor of Computer Engineering</i> Coursework: Data Structures, Cloud Computing, Network Security, Software Testing, Artificial Intelligence and Machine Learning, Big Data Analytics, Software Architecture, Statistics	<i>Aug 2018 - May 2022</i> GPA: 8.76

Professional Experience

SupplyPoint <i>Web Developer</i> <ul style="list-style-type: none">Mapped onboarding processes with HR, compliance, and operations across 4 teams using React, Redux, TypeScript, and Node.js; reduced new employee setup time by 25% through 3 iterative workflow changes.Conducted 10 user testing sessions on digital products used by manufacturing support teams and translated feedback into 6 prioritized UI modifications; improved sprint-level visibility by 30% through A/B testing and KPI tracking.Produced 15 low and high-fidelity UX design prototypes using Figma, Balsamiq, Adobe XD, and Illustrator for internal inventory management dashboards; aligned all outputs with WCAG and ADA web accessibility standards, reducing review time by 40%.Structured 6 Power Automate flows connected to SharePoint lists for HR ticket routing to eliminate manual triage efforts and supported scaling across 3 departments.Connected Power BI dashboards with SQL databases, 5 Excel data sources, and Airflow pipelines using DAX expressions; reduced redundant reporting by 50% and increased dashboard usage by 3x within 1 quarter.	Remote, USA <i>Aug 2024 - Current</i>
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North Carolina State University <i>Research Assistant</i> <ul style="list-style-type: none">Aggregated and clustered over 5,000 system event logs using Python (pandas and NumPy) and R to identify anomalies across enterprise collaboration tools and inform user research.Translated data analysis into interface adjustments in coordination with UX teams, resulting in an 18% improvement in task completion and better alignment with user feedback.	Raleigh, NC, USA <i>Jun 2024 - Aug 2024</i>
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Citibank <i>Software Engineer</i> <ul style="list-style-type: none">Maintained Spring Boot microservices supporting 10,000+ daily payment transactions; integrated REST APIs, containerized services with Docker, and deployed to OpenShift for modular scaling across business units using microservices architecture.Simulated 1,000+ concurrent users on an internal fintech testing platform by integrating a Python backend, Angular frontend, and PostgreSQL database, using Prometheus and Grafana to monitor performance and pinpoint service degradation under peak load.Tripled Kafka throughput in the fraud detection pipeline by tuning consumer group settings; integrated updates into CI/CD using Jenkins, Maven, and Gradle, with 85% test coverage and version control via Bitbucket.Optimized client-side performance for loan application dashboards by implementing React and TypeScript-based rendering strategies, reducing page load time by 40% and supporting 500,000+ monthly user sessions without service degradation.Pulled sprint metrics from Atlassian Jira and Oracle using REST API and GraphQL, reducing reporting time by 50% and informing biweekly reports for both engineering and product management.	Pune, India <i>Jul 2022 - Jul 2023</i>
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Shyena Tech Yarns <i>Software Developer Intern</i> <ul style="list-style-type: none">Automated multilingual customer support flows using NLP pipelines (spaCy, RASA), improving customer engagement and enabling 80% query resolution without escalation.Structured user session data via DynamoDB and prediction models, reducing latency by 35% across 10,000+ chatbot interactions by tailoring responses based on user feedback.Indexed chat logs using Elasticsearch and visualized usage patterns to guide user research and improve interaction design.	Pune, India <i>Aug 2021 - May 2022</i>
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Citibank <i>Software Engineer Intern</i> <ul style="list-style-type: none">Simulated 1,000+ concurrent users via Kafka, JMS, and Spring Boot to load test Java-based microservices and assess performance under stress conditions.Achieved 85% test coverage by applying JUnit-based test-driven development (TDD); integrated unit and automated testing into Bitbucket CI pipelines, reducing post-deployment bugs by 35% and supporting stable two-week Agile sprints.	Pune, India <i>May 2021 - Jul 2021</i>
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Projects

MRI Brain Tumor Detection <ul style="list-style-type: none">Devised a deep learning model using TensorFlow and CNNs to classify brain tumors from MRI scans with 92% accuracy, processing 10,000+ images; augmented training with LLM-based synthetic data generation to improve class balance and model generalization using Python, NumPy, Pandas, and Scikit-learn.
Help the Pack <ul style="list-style-type: none">Shaped user interface mockups and graphic design assets in Figma and Adobe Creative Suite; ran user research and usability testing to raise customer engagement by 40%, then translated findings into frontend code using HTML, CSS, and JavaScript.
Rail Ticketing System <ul style="list-style-type: none">Crafted a full-stack e-commerce application using Ruby on Rails and MySQL, designing a scalable backend with Design Patterns and CRUD operations to manage 1,000+ passenger records, enabling seamless ticket booking and end-to-end workflows.
Clinical Data Workflow Optimization <ul style="list-style-type: none">Collaborated in Agile teams to build a cloud-based data visualization platform using Tableau, REST APIs, JIRA, and Postman. Improved data accuracy by 35% through efficient SDLC practices and rigorous testing.
Carify <ul style="list-style-type: none">Automated extraction of 1,000+ listings from 5+ car platforms via Django and SQL pipelines according to customer needs, enabling 30% faster vehicle comparison.Predicted vehicle maintenance index using regression models on Hadoop from 2000+ records, improving forecast accuracy by 28%.

Skills

Languages: Python, Java, JavaScript, TypeScript, SQL, C++, HTML, CSS
Web Frameworks: React, Angular, Bootstrap, Node.js, Express.js, Spring Boot, Flask, Tableau, Power BI
Databases: PostgreSQL, Oracle, MongoDB, MySQL, NoSQL, MariaDB
UI/UX: Figma, Adobe XD, Balsamiq, Adobe Creative Suite, Google Analytics, Adobe Analytics, Web Design
Cloud / DevOps: Amazon Web Services, Azure, Docker, Kubernetes, OpenShift, GitHub, Bitbucket, Confluence, CI/CD, Git
UX & Product Tools: A/B Testing, Usability Testing, Wireframing, Mockups, User Research, WCAG, Journey Mapping