Uttkarsh Chugh

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SKILLS

- Languages & Tools: Kotlin, Python, Java, SQL, Git
- · Android & Backend: Jetpack Compose, Retrofit, Dagger, Hilt, REST APIs, Spring Boot, Firebase
- Databases & ML: SQLite, Firebase Firestore, Room DB, NumPy, Pandas, Matplotlib, Scikit-learn

PROJECTS

Veggito Link

Sep 2024 - Nov 2024

D2C E-Commerce Platform

Android (Kotlin, Jetpack Compose), Firebase

- Developed a scalable prototype of a Direct-to-Consumer (D2C) Android platform with over 50 live product listings, using Firebase for real-time inventory updates, improving sync **efficiency by 27%** and simplifying seller-side product management with listing and update capabilities across the entire catalog, including product addition, deletion, seamless UI integration.
- Conceptualized and led the design phase of an Al-powered price prediction model aimed at enhancing pricing accuracy by 23%, reducing losses from price fluctuations, and enabling fair market distribution for local sellers and farmers.
- Simulated B2B collaboration with 5+ agro-tech startups to test resource allocation, improve workflows, streamline seller onboarding, and boost system efficiency through planning logic and feedback supported by realistic data flows.
- Improved platform scalability by evaluating the prototype with **10+ testers**, resolving performance issues, refining UI/UX, enhancing user flow, and documenting usability challenges, layout inconsistencies, and functional gaps.

Canvas Drawing Application Link

May 2024 - July 2024

Digital Sketching Application

Android (Kotlin, XML, Canvas API)

- Built a feature-rich drawing app equipped with **5+ creative tools** including brush size customization, color selection, undo-redo support, and image saving, achieving a 93% positive feedback rate from users across different age groups and skill levels.
- Engineered a custom View using Android's Canvas and Paint APIs to enable smooth drawing interactions, supporting stroke rendering with minimal latency, tested across **8+ devices** to ensure consistent output.
- Utilized XML-based layouts to craft a structured, responsive, and user-friendly interface, refined through multiple feedback loops and tested by over 10 users to identify interaction issues and improve layout clarity.
- Developed a bitmap export feature allowing users to save artwork to local storage in high quality, with naming conventions, format handling, and runtime permissions—achieving **100% success rate** during testing across Android API levels.

EXPERIENCE

Adversarial Nibbler Program - Google

Oct 2024 - Feb 2025

Al Safety & Responsible Al Research

Punjab

- Conducted **50+ adversarial prompt experiments** to identify vulnerabilities in generative AI systems, reducing unsafe output generation through consistent evaluation, categorization, and mitigation efforts.
- Designed and executed 10+ testing strategies to improve evaluation accuracy by 34% and enable fine-tuning of detection pipelines
- Simulated unsafe prompt scenarios across categories, generating data that enhanced responsible AI filters and auditing tools.
- Strengthened prompt engineering knowledge, facilitating model improvements for safer responses.

Smart India Hackathon (SIH) Semi-Finalist

Aug 2024 - Sep 2024

Punjab

Lovely Professional University

- Proposed a D2C supply chain platform reducing middlemen by 87%, boosting local seller revenue and simplifying rural logistics.
- Built an inventory management system using Firebase, managing real-time data for over 50 product listings
- Presented the prototype before representatives of **MSME (India)** to seek funding and feedback, establishing the idea's relevance and scalability in government-aided rural initiatives through direct engagement and formal presentation rounds.
- Used beginner-friendly tools for collaboration among 5 members, aligning UI/UX, functionality and goals under strict timelines.

CERTIFICATIONS

Cloud Computing -NPTEL Link

Oct 2024 - Jan 2025

Complete Machine Learning & Data Science Program – GeeksForGeeks Link

June 2024 - Dec 2024

EDUCATION

Lovely Professional University

Grade - 8.28 CGPA Graduating May 2026

B. Tech. Computer Science Engineering