Hridyesh Kumar

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Experience

- **Limeroad** Gurugram
  Software Development Intern *February 2025 - August 2025*
  - **Integrated Vmart storefront** into the app's navigation drawer by embedding a secure WebView and refactoring sidebar routing (**Kotlin—MVVM**); identified and cleared every critical defect in the release backlog.
  - Engineered System UI components using **Jetpack Compose with Material3**, implementing interoperability between Compose and traditional View system while debugging performance issues and **optimizing UI rendering** through proper state management, creating developer-friendly APIs and documentation for team adoption.
  - Architected developer-friendly System UI APIs implementing **unidirectional data flow patterns**, creating reusable components and best practice guidelines that enable other developers to achieve 95% search accuracy with ¡50ms response times, demonstrating expertise in building tools that enhance developer productivity across teams.
  - Designed modular Android architecture implementing clean architecture principles with **Hilt dependency injection**, creating **reusable feature** modules with proper component scoping.
- **College Setu** Delhi
  Software Development Intern *May 2024 - July 2024*
  - Revamped the company's website using ReactJS and Tailwind CSS and developed a Data Collection Portal with Flask, enhancing functionality and user experience.
  - Implemented comprehensive testing strategies and debugging workflows, **optimizing memory management** and troubleshooting performance bottlenecks while collaborating in agile development environment.

Projects

- **FurniAR** AR, Android Development, Firebase
  Repository *08/2024 - 08/2024*
  - **Modular Architecture**: Implemented clean Android architecture using **Kotlin with MVVM pattern and Hilt DI framework**, creating **open-source-ready component libraries** and technical documentation that improved developer onboarding and **achieved 30% performance improvement** through memory management optimization.
  - **Enterprise Architecture**: Implemented **multi-module architecture** with dependency injection across feature modules, managing component lifecycles while reducing backend response times by 20% through optimized state management and unidirectional data flow patterns.
- **Optimized Neural Network-Based Routing Protocol for VANETs** VANET, Machine Learning
  Repository *08/2024 - 11/2024*
  - **Optimization**: Developed a hybrid routing protocol for VANETs integrating Neural Networks and Reinforcement Learning, achieving a 20% reduction in latency and a 15% improvement in routing efficiency.
  - **Adaptability**: Designed and implemented a neural network-driven decision-making system to optimize routing in dynamic vehicular networks, demonstrating scalability and adaptability through real-time simulations.

Skills

- **Android Architecture**: Kotlin, Java, Android SDK, MVVM, Clean Architecture, Modular Design, Dependency Injection (Hilt)
- **Mobile Technologies** : Jetpack Compose, Material Design, Performance Optimization, Memory Management, UI/UX Design
- **Developer Relations**: System UI APIs, Technical Documentation, Community Engagement, API Design

Education

- **Netaji Subhas University of Technology** Delhi
  Bachelor of Technology in Mathematics and Computing *2025*
  - Relevant Coursework: Data Structures, Design and Analysis of Algorithms, Machine Learning, Software Engineering, Soft Computing, Computer Networks, Operating Systems, Scientific Computing, Theory of Automata, Optimization, Mathematical Statistics, Database Management System, Computer Architecture, Big Data Analytics

Achievements

- Authored a **23-page research paper** on improving Grover's algorithm for quantum search optimization, leveraging IBM's Quantum Experience toolset for simulation and testing. Delivered 3+ on-campus presentations to faculty.
- Co-authored a **13-page journal article** on a hybrid VANET routing protocol using ANN and Reinforcement Learning, achieving improved PDR, latency, and throughput through multimetric optimization and simulations.