PROBLEM STATEMENT:

NLP

1. Building Bridges with NLP: Communication Beyond Speech

Imagine a world where people with speech disorders can express themselves freely. Design an NLP-powered system that bridges the communication gap. Think beyond traditional speech recognition - how can NLP empower individuals with speech difficulties, improve therapy, and create a more inclusive environment?

2. Banking on Your Voice: A Secure and Inclusive Financial Future for All

Cash is king, but what about voice? Design a revolutionary voice-based financial platform for India. Remember, security and regional language accessibility are key! How can NLP make financial transactions faster, safer, and inclusive for everyone, regardless of location or dialect?

3. Unlocking Potential: Personalized Learning for Every Child

Every child's journey is unique. Develop an NLP tool that tailors itself to individual needs, especially for children with autism or motor neuron disorders. How can NLP assess progress, personalize learning, and empower children with communication challenges to reach their full potential?

Computer Vision

1) Citizen Science for a Healthy Planet: Crowdsourcing with Computer Vision

Monitoring the health of our planet requires a global effort. Design a computer vision system that leverages the power of citizen science. How can computer vision analyze user-submitted photos and videos (e.g., from mobile apps) to track environmental changes, identify threats, and empower communities to be part of the solution?

2) Beyond Traffic Jams: Predicting the Pulse of the City

Traffic congestion is a constant foe in megacities. Design a "traffic clairvoyant" system using computer vision. Think beyond just digital twins - how can computer vision anticipate congestion hotspots, suggest real-time route changes, and ultimately create a smoother flow for everyone?

3) The Connected Home: A Vision for Assisted Living

Technology can improve lives. Design a computer vision system for smart homes, particularly for elderly or disabled individuals. How can computer vision enable tasks like fall detection, medication reminders, or object recognition to empower independent living and create a safer environment?

Cyber Security

1. Taming the Online Wild West: A Multi-Pronged Approach to Social Media Safety

Social media can breed negativity, but can we turn the tide? Design a multifaceted solution to combat misinformation and cyberbullying. How can we leverage AI and community engagement to detect fake news, identify cyberbullies, and promote online safety without compromising privacy? Focus on creative detection methods, innovative user reporting tools, and educational campaigns to build a healthier online environment.

2. Empowering the End User: A Peer-to-Peer Security Network for Students

Centralized security systems can have limitations. Design a peer-to-peer security framework for a college network. Imagine a system where students' devices contribute to the overall network security. How can students identify and report suspicious activity, share threat information securely, and collectively build a stronger defense against cyberattacks?

3. The Power of Permissions: Granular Access Control for a Dynamic Network

College networks have diverse users and needs. Design a multi-layered access control system that provides granular control over resources in a college network. Imagine a system that can dynamically adjust permissions based on user roles and GPS location within the campus. This would ensure efficient access for legitimate users while restricting unauthorized access to sensitive data. Focus on user-friendliness and a balance between security and functionality.

Green Energy

1) AI-powered Renewable Energy Prediction:

Challenge: Develop an AI-powered tool that uses historical data and weather forecasts to predict the output of renewable energy sources like solar and wind.

Focus on creating an easy-to-use interface that visualizes predictions and helps users optimize energy consumption or production based on anticipated availability.

2) Green Energy Ecosystem Platform:

Prompt: Imagine a future where green energy seamlessly integrates into our lives. Design a platform that empowers individuals and organizations to actively participate in a sustainable energy ecosystem. Consider how real-time data, AI, and user experience can foster informed decision-making, collaboration, and a positive environmental impact.

3) Blockchain-based Green Energy Trading:

Challenge: Develop a prototype for a blockchain-based platform that facilitates secure and transparent peer-to-peer trading of renewable energy between individuals or small communities.

Industry 4.0

1) Blockchain for Farmers: Industry 4.0 Revolutionizes Agriculture

Challenge: Disrupt the Indian agricultural supply chain! Design an integrated platform using Industry 4.0 technologies to empower farmers and bring transparency to the market. Imagine a future where blockchain connects farmers directly with buyers, eliminates middlemen, and ensures fair pricing. How can technology create a more efficient, sustainable, and rewarding agricultural ecosystem for everyone involved?

2) Education Revolution: Industry 4.0 for Indian Exams

Challenge: Design a future of learning in India, leveraging Industry 4.0, to empower students for competitive and higher education entrance exams. Consider AI, real-time data, and interactive experiences to personalize learning journeys and maximize success rates. How can technology bridge the gap between traditional education and the needs of tomorrow's workforce?

3) Interactive 3D Product Design with Real-time Feedback:

Challenge: Develop a web-based platform where engineers can design and iterate on complex industrial products in 3D. Utilize computer graphics to create a responsive environment where users can manipulate models, visualize changes instantly, and receive real-time feedback on design feasibility or potential issues.