**Optical Neural Network**

**User Stories**

As a researcher,

I want to experiment with optical neural networks to explore how light-based computation can accelerate machine learning tasks.

I want the platform to be modular so I can easily integrate new optical components or algorithms.

I want to visualize real-time data from the optical neural network to analyze its performance under different configurations.

I want the system to support large datasets and handle them efficiently with minimal energy consumption.

I want thorough documentation and open-source tools for adapting the system to various research needs.

I want to easily scale the network for more complex simulations or experiments.

As a chip designer,

I want to develop custom chips optimized for optical neural network operations to maximize processing speed and energy efficiency.

I want the chips to be small and compact for potential integration into next-generation devices.

I want the hardware to be adaptable for different use cases, from data centers to consumer electronics.

I want to perform rapid prototyping and testing to evaluate the performance of ONN chips before full-scale production.

I want to reduce heat generation compared to traditional semiconductor chips to enhance device longevity and efficiency.

I want detailed benchmarking and performance metrics to assess the competitiveness of ONN chips in the market.

As a medical imaging technician,

I want the optical neural network to rapidly process MRI and CT scans so that I can provide quick and accurate diagnoses.

I want the system to be intuitive and easy to integrate into existing medical equipment without requiring extensive training.

I want high precision and low error rates in image analysis to improve the reliability of patient diagnoses.

I want the network to be scalable for handling the increasing volume of imaging data in large hospitals.

I want the processing system to be energy-efficient, reducing the operational costs of high-performance medical equipment.

I want the technology to be approved by regulatory bodies, ensuring safety and compliance with medical standards.

As a consumer,

I want devices powered by optical neural networks to be faster and more responsive, improving my user experience with applications like virtual reality and gaming.

I want the devices to have lower power consumption, extending battery life without sacrificing performance.

I want products that incorporate ONN to be affordable and competitive with current electronic devices.

I want the technology to improve everyday applications, such as real-time voice assistants and image recognition in smartphones.

I want the devices to be sleek and compact without compromising processing power.

I want to know that the technology is secure and protects my personal data from cyber threats.

**Chatgpt Prompt**

“Analyze the user for “optical neural network”.”

“As a user profile of “academic researchers and engineers, chip design companies, medical image processors, and ordinary consumers”, write user stories in a format similar to: As a user, I want to have at least 6 degrees of freedom.”