

## 18. Pine Labs

**Industry:** FinTech (Payments & Point of Sale Solutions)

### **Problem Statement:**

Pine Labs aims to improve its point of sale (POS) system, enabling merchants to easily manage transactions, track sales, and integrate with financial services for customer insights and payments.

### **Technical Implementation:**

- **Backend:** **Node.js** with **Express.js** for developing APIs to handle transactions, merchant accounts, and payment gateway integrations.
- **Frontend:** **React** for building the merchant-facing dashboard where they can view sales, manage payments, and offer discounts to customers.
- **Database:** **MongoDB** to store transaction data, merchant profiles, and sales reports. **Firebase** for real-time updates on transactions and sales metrics.
- **GraphQL:** Use **GraphQL** to query detailed transaction history, customer behavior, and payment methods, enabling flexible and efficient data retrieval.
- **Sales & Ops:** **Node.js** will help handle promotional campaigns, merchant acquisition, and sales analytics.
- **Security:** Implement strong encryption and secure authentication protocols for transaction processing.