Abhay Kushwah

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PROFESSIONAL SUMMARY

Software Development Engineer with 1+ years of professional experience in Angular, TypeScript, and Tailwind CSS, specializing in building scalable, high-performance web applications. Proven track record in full-stack development with Node.js and modern frontend frameworks. Passionate about delivering efficient, maintainable solutions and leveraging cutting-edge technologies to solve complex problems.

SKILLS

Languages & Frameworks : TypeScript, JavaScript, Angular (17, 19), Node.js, AdonisJS, Electron, HTML/CSS
Styling & UI : Tailwind CSS, Bootstrap 5, Atomic Design Pattern, Responsive Design, PWA
Database & Tools : SQL, SQLite, Firebase, PostgreSQL, Prisma ORM, RESTful APIs, Git
DevOps & Architecture : Docker, Redis, BullMQ, Event-Driven Architecture, Microservices
Core Strengths : Fast Learner, Problem Solver, Adaptable, Team Player

EXPERIENCE

UBITECH SOLUTIONS PVT LTD
Software Development Engineer II

July 2024 – Present
Gwalior, M.P

- Handled **core development tasks** for a Human Resource Management (HRM) system built with **Angular 19, TypeScript, and Tailwind CSS**
- Managed the **full development lifecycle**, ensuring smooth implementation of attendance, leave management, payroll, and timesheet functionalities
- Collaborated with cross-functional teams to **enhance system efficiency and user experience**
- Developed and integrated **RESTful APIs using Node.js (AdonisJS framework)** to manage backend operations and ensure secure, efficient data flow between client and server

UBITECH SOLUTIONS PVT LTD
Software Development Intern

April 2024 – July 2024
Gwalior, M.P

- Built and maintained web application features using **Angular 17 and Bootstrap 5**
- Gained hands-on experience in frontend development and collaborative coding practices

PROJECTS

DevDebt: Automated Technical Debt & Sprawl Visualizer | Live Demo

- Advanced static analysis platform designed to visualize and quantify **"Code Sprawl"** in large-scale software projects, focusing on maintainability architecture rather than syntax
- **Sprawl Metrics Engine**: Developed custom algorithm calculating composite "Debt Score" based on 5 dimensionsSize, Complexity, Duplication, Responsibility, and Coupling using **AST-based analysis**
- **AI Code Detection**: Implemented **Entropy Analysis** algorithm to identify and flag AI-generated boilerplate code with high structural repetition and low entropy patterns
- **Interactive Visualizations**: Built full-screen zoomable **D3.js Treemap** rendering 10,000+ nodes, color-coded by risk levels with hot-spot detection for top 50 problematic files
- **Automated GitHub Scanning**: Securely clones and analyzes repositories in **sandboxed Docker containers** with event-driven architecture using BullMQ (Redis) for job queues
- **Impact**: Reduced refactoring time by enabling developers to instantly identify high-risk zones, enforce Single Responsibility Principle (SRP), and maintain AI-generated code quality
- **Tech Stack**: Angular 19 (Frontend), Node.js & Express (Backend), D3.js, PostgreSQL, Prisma ORM, Docker, Redis, TailwindCSS

Point of Sale (POS) Desktop Application | *Private Repository*

- Full-featured desktop POS application built with **Angular and Electron**, enabling cross-platform deployment for Windows, macOS, and Linux with native desktop capabilities
- **Offline-First Architecture**: Implemented **SQLite for local data persistence**, enabling uninterrupted operations during network outages with automatic background synchronization to live database when connectivity is restored
- **Data Synchronization**: Developed custom sync engine to handle conflict resolution, queue offline transactions, and maintain data consistency between local SQLite and remote production database
- **Billing System**: Developed comprehensive billing module with real-time invoice generation, multi-item cart management, automatic tax calculations, and discount application with validation rules
- **Inventory Management**: Implemented real-time stock tracking system with low-stock alerts, bulk product updates, and automated inventory reconciliation across multiple transactions
- **Authentication & Authorization**: Built secure role-based access control (RBAC) system with encrypted credentials, session management, and granular permission controls for admin, cashier, and manager roles
- **Database Architecture**: Designed dual-database system with **SQLite (offline) and SQL (production)** using migration scripts for schema versioning, ensuring data integrity across environments
- **Reporting & Analytics**: Created dynamic reporting dashboard with sales analytics, inventory reports, payment breakdowns, and exportable PDF/Excel reports for business insights
- **Tech Stack**: Angular, Electron, TypeScript, SQLite, SQL, Node.js, HTML/CSS, Database Sync Algorithms, PDF generation libraries

Human Resource Management (HRM) System | Live Demo

- Comprehensive employee management platform designed to streamline HR operations including attendance tracking, leave management, payroll processing, and timesheet handling
- **Employee Tracking**: Integrated **Firebase for real-time location tracking** and data management
- **Attendance Management**: Supports multiple methods including biometric authentication, face recognition, selfie verification, and **AI-based detection to prevent spoofing** (e.g., fake face masks or multiple faces)
- **Secure Authentication**: Implemented token-based authentication for enhanced security and access control
- **Google Maps Integration**: Enabled location-based attendance marking for accurate tracking
- **Progressive Web App (PWA)**: Built with fully responsive UI ensuring seamless access across devices
- **Atomic Design Pattern**: Followed atomic design principles with modular, reusable components for scalable and maintainable UI architecture
- **Tech Stack**: Angular 19, TypeScript, Tailwind CSS, Node.js (AdonisJS), Firebase, Google Maps API

EDUCATION

Madhav Institute of Technology & Science   Graduated June 2022
Master of Computer Applications (MCA)   Gwalior, M.P

SMS Govt Model Science College   Graduated June 2020
Bachelor of Science in Computer Science   Gwalior, M.P