**Detailed Technology Breakdown by Feature**

**1. 3D Interactive Elements**

* **Three.js** - Core 3D graphics library
* **React Three Fiber** - React components for Three.js
* **Drei** - Useful helpers for React Three Fiber
* **GSAP** - Advanced animations and transitions
* **WebGL** - Hardware-accelerated graphics
* **Blender/Three.js Editor** - 3D model creation and optimization

**2. E-commerce & Product Management**

* **Database**: PostgreSQL with Prisma ORM
* **Payment Processing**:
* **Stripe** - Primary payment gateway
* **Razorpay** - Alternative for Indian market
* **Inventory Management**: Custom system with PostgreSQL
* **Order Management**: Custom order tracking system
* **Product Catalog**:
* **Cloudinary** - Product image storage
* **PostgreSQL** - Product metadata
* **Shopping Cart**: Zustand for state management
* **Order Notifications**:
* **Resend** or **SendGrid** - Email notifications
* **Twilio** - SMS notifications

**3. Telemedicine & Video Calling**

* **Video/Audio Calls**:
* **Agora SDK** - Primary video calling solution
* **Twilio Video** - Alternative option
* **WebRTC** - Direct peer-to-peer calls
* **Real-time Communication**:
* **Socket.io** - Real-time messaging and presence
* **WebSocket** - Direct connections
* **Appointment Scheduling**:
* **Calendly API** - Scheduling integration
* **Custom scheduling system** with PostgreSQL
* **Medical Records**:
* **PostgreSQL** - Patient data storage
* **HIPAA compliance** considerations

**4. User Authentication & Profiles**

* **Authentication**:
* **NextAuth.js** - Multi-provider authentication
* **JWT tokens** - Session management
* **bcrypt** - Password hashing
* **User Profiles**:
* **PostgreSQL** - User data storage
* **Cloudinary** - Profile picture storage
* **Zustand** - Client-side state management

**5. Frontend Technologies**

* **Framework**: Next.js 14 with App Router
* **Language**: TypeScript
* **Styling**:
* **Tailwind CSS** - Utility-first CSS
* **Framer Motion** - Animations
* **Radix UI** - Accessible components
* **State Management**:
* **Zustand** - Global state
* **React Query** - Server state
* **React Hook Form** - Form handling

**6. Backend & API**

* **Runtime**: Node.js
* **Framework**: Express.js or Next.js API routes
* **Database**:
* **PostgreSQL** - Primary database
* **Redis** - Caching and sessions
* **ORM**: Prisma
* **Validation**: Zod
* **API Documentation**: Swagger/OpenAPI

**7. Deployment & Infrastructure**

* **Frontend Hosting**: Vercel
* **Backend Hosting**:
* **Railway** - Easy deployment
* **DigitalOcean** - More control
* **AWS EC2** - Enterprise option
* **Database Hosting**:
* **Supabase** - PostgreSQL with real-time
* **Railway** - Managed PostgreSQL
* **AWS RDS** - Enterprise option
* **File Storage**:
* **Cloudinary** - Images and videos
* **AWS S3** - General file storage
* **CDN**: Vercel Edge Network

**8. Monitoring & Analytics**

* **Error Tracking**: Sentry
* **Analytics**: Google Analytics 4
* **Performance**: Vercel Analytics
* **Uptime Monitoring**: UptimeRobot

**9. Security & Compliance**

* **SSL**: Let's Encrypt (automatic with Vercel)
* **Data Protection**:
* **bcrypt** - Password hashing
* **JWT** - Secure tokens
* **CORS** - Cross-origin protection
* **Medical Data**: HIPAA compliance considerations
* **Payment Security**: PCI DSS compliance (handled by Stripe)

**10. Development Tools**

* **Version Control**: Git with GitHub
* **Package Manager**: npm or pnpm
* **Code Quality**:
* **ESLint** - Code linting
* **Prettier** - Code formatting
* **Husky** - Git hooks
* **Testing**:
* **Jest** - Unit testing
* **Playwright** - E2E testing
* **Environment**:
* **Docker** - Containerization
* **dotenv** - Environment variables

**11. Third-party Integrations**

* **Maps**: Google Maps API (for doctor locations)
* **Calendar**: Google Calendar API
* **Notifications**:
* **Push notifications** - Service Workers
* **Email** - Resend/SendGrid
* **SMS** - Twilio
* **Social Login**: Google, Facebook, Apple

This comprehensive stack ensures scalability, security, and modern development practices while providing all the features you need for your Ayurvedic platform.