Melvin Vu

**10 Rue Guynemer, 85000 La Roche-sur-Yon, France | melbesnard85.github.io |
melbesnard85@gmail.com**

Summary

As an innovative and passionate Full Stack Developer, he has extensive experience building scalable, high-performance web and mobile applications across healthtech, SaaS, and blockchain sectors. Skilled in **AI** and **ML** integration, including chatbots, predictive analytics, and data-driven automation, delivering intelligent real-world solutions. He particularly enjoys crafting modern, user-focused interfaces with **React**, **React Native**, **Angular**, and **Vue** in **Agile/Scrum** environments.

Education

Hanoi University   **2013- 2017**

Bachelor's degree of Computer Science

Experience

Full Stack Developer (AI Integration), CarersHQ Ltd   **Oct, 2023 – Jan, 2026**

- Led a full refactor and modernization of an aging **React Native** application, migrating code to a modular, scalable architecture using **Expo SDK 50**+, **TypeScript**, and **React Native** for consistent UI/UX across platforms.
- Implement native OS authentication methods (**Touch ID**, **Face ID**) using **Expo** Local Authentication and native modules for secure and seamless user access.
- Architected and delivered robust care management features including:
  - Timesheet generation & validation, with real-time logging and digital signatures.
  - Task scheduling and calendar sync (integrated with **Google Calendar API**).
  - In-app communication module with real-time messaging, audio/video calls via **WebRTC**, and push notifications using Firebase Cloud Messaging (**FCM**).
  - Location tracking & routing with **Google Maps SDK** and geofencing for monitoring caregiver visits.
- Developed scalable **RESTful APIs** and **GraphQL** endpoints using **NestJS**, **TypeORM**, **PostgreSQL**, and **Redis** for caching real-time location and chat sessions.
- Led development of an **AI-driven care platform** empowering UK caregivers with intelligent tools for **client matching**, **task automation**, and **care insight generation**.
- Integrated an **AI chatbot** using **OpenAI API** and **LangChain**, connected to internal APIs for contextual Q&A and support.
- Built a modular **React Native** app with a **NestJS** backend on **AWS**, integrated with **Stripe** and **WebRTC** for secure payments and real-time communication.
- Implemented **MLOps workflows** with **FastAPI** and **Docker** for seamless model deployment and performance monitoring.
- Created a responsive Admin Dashboard (**React** + **Chakra UI**) for managing users, carers, care logs, compliance, payments, and analytics.
- Ensured data compliance with **GDPR** by implementing robust encryption, access control (RBAC), and audit logging.

- Setup and maintained **CI/CD** pipelines using **GitHub Actions** and deployed it using **Docker**, **AWS Fargate**, and **S3/CloudFront** for frontend hosting.
- Wrote unit and integration tests using **Jest**, **React Testing Library**, and **Supertest**.
Tech Stack: React Native, Expo, TypeScript, NestJS, Node.js, PostgreSQL, Redis, Docker, Kubernetes, AWS (ECS, Fargate, S3, CloudFront, RDS), Stripe, Firebase, GraphQL, WebRTC, Jest, CI/CD, Sentry, Datadog, OpenAI API, LangChain, FastAPI, Python

Front-end Developer, Miidas   Sep, 2021 – Sep, 2023

- Created frontend using UX design in a pixel-perfect and user friendly way.
- Created frontend to integrate Live video conferencing & collaboration function using **WebRTC**.
- Developed a blockchain-based NFT marketplace platform using **React**, **Redux Toolkit**, **Material-UI**, **Storybook**, and **Web3.js**.
- Introduced an atomic design with descriptive documentation using **Storybook** and configured its UI library and design system on the top of **Material-UI** using all the reusable components like atoms, molecules, and organisms.
- Built a user-friendly filtering functionality and boosted the code quality and performance significantly.
- Created several muti-chart like Line Chart, Bar Chart, Pie Chart and Bubble Chart within backend APIs integration.
- Created test cases for frontend using **Jest**.
- Integrated **ChatGPT** API in user QA page.
- Created a React Native mobile application, integrating Auth0 for authentication, Firebase Cloud Messaging (**FCM**) for push notifications, and various third-party APIs to enhance functionality and user experience.
Tech Stack: React, Redux, Next.js, Storybook, TypeScript, Tailwind CSS, Material-UI, WebRTC, Web3.js, Webpack, CanvasJS Chart, Node.js, ChatGPT, Jest, React Native, Firebase

Full-stack Engineer, Wee Bee Kids Inc   May, 2019 – Aug, 2021

- Created frontend using **Figma** design for mobile responsiveness.
- Led the development of a unified rich text editor that runs on mobile, desktop, and web for users.
- Developed a **JavaScript**-based image annotation app that runs on desktop and web, it also allows for re-editable PNGs/JPGs by storing vector annotation data in the image binary.
- Created a feature to present **Angular**-based pages in a full-screen auto-generated presentation with advanced user controls and layout options.
- Integrated a build pipelines of 5+ complex applications to reliably use common rich-text editing component.
- Developed a custom vector graphics library for use in annotating both bitmaps and PDFs. Implemented **Microservices** using a serverless framework.
- Developed a **React Native** mobile application and implemented a real-time messaging feature using **WebSockets**, ensuring seamless and instant communication between users.
Tech Stack: Angular, NgRx, Rx.js, EJ2, Tailwind CSS, PHP, MySQL, React Native, GraphQL.

Front-end Developer, Homyse   Oct, 2017 – Apr, 2019

- Worked on providing API endpoints with **Node.js** and **MongoDB**.
- Built from scratch admin platform for managing platform's database entities and users using **React**, **Node.js**, and **Mongoose**.
- Implemented complex UI components with **React/TypeScript** and **SCSS**.
- Improved the UX by creating several DnD-based components.

- Created mobile app and integrated with backend APIs using **IONIC** framework. Wrote scripts to use and manipulate data from various sources.
- Wrote scripts to use and manipulate data from various sources.

Tech Stack: TypeScript, React, Redux, Next.js, Tailwind CSS, Node.js, IONIC, REST API, Google Cloud Platform (GCP), WebSocket, Webpack, Mongoose, Jest

Skills & abilities

- Html, CSS | SASS
- Bootstrap | Tailwind CSS
- Material UI
- Javascript, Typescript
- React | Redux | Reduxthunk, Next.js
- React Native
- Expo
- IONIC
- Angular, Rx.js
- Vue | Nuxt
- Node.js | Express | Nest.js
- PHP | Laravel | Wordpress
- MongoDB, SQL, MySQL, Postgresql, GraphQL
- Jest, Mocha
- Apache Cassandra, Kafka, Elasticsearch
- Swagger
- Microservices
- WebRTC
- Storybook
- Stripe
- Firebase
- Solidity | Web3 | Ethers
- Karma, Jasmine, Cypress
- RESTful API, Google APIs
- WebRTC
- Sentry
- Datadog
- NPM
- AWS (Dynomodb, S3 bucket, Lambda, SQS, EC2, Fargate, CloudFront, RDS), Azure
- Nginx
- Docker, Kubernetes, Jenkins, Maven,Terraform
- Machine Learning, Predictive Modeling, Optimization (Python, scikit-learn,TensorFlow)
- NLP (spaCy, NLTK)
- Pandas, NumPy
- LLM, Generative AI, OpenAI, ChatGPT, LangChain
- Git, GitLab
- Jira, Notion, Trello
- Scrum