# Madhav Manoj

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Product Manager, Systems Engineer & Full-stack developer with 6 years of experience in building web platforms, processing pipelines and mobile applications, using React, Rust, Python, Java, Kubernetes, Docker, Jenkins and more.

# Experience

## AspecScire                                                    June 2017 - March 2023
### Technical Product Manager

- Built features from the ground-up, from customer interactions to wireframes (Mockflow) & designs (Figma), to implementation and documentation.
- Advocated for adding product analytics to track & improve usage of the Vimana platform.
- Planned a refactor of the front-end codebase to reduce technical debt, and improve developer experience.
- Added feature flags for seamless transitions from third-party technology providers, to internal solutions.
- Handled customer & product support, addressed adhoc client requirements.

### Full-stack Developer

- Owned the front-end codebase and user-facing functionality, first in Angular and later in React, for the drone analytics platform, Vimana.
  - Implemented custom map interactions and visualization for Geospatial Data. Integrated WASM modules to improve performance.
  - Used antd for UI components, redux for global state management, react-joyride for user tutorials, and react-router for routing.
  - Created a framework for migrating React class components to functional components.
  - Updated webpack & migrated our custom webpack config to add Hot Module Replacement, improving build and refresh times.
- Written & maintained the APIs for the web platform Vimana
  - Owned features from gathering business requirements, to database & API design, to implementation, documentation and testing.
  - Built multiple python-flask microservices to support a mobile app, and platform features.
  - Re-architected & migrated APIs from python-django to Java Spring.
  - Migrated & consolidated the APIs from Java to Rust, to improve performance and maintainability.
  - Used Swagger & OpenAPI to create internal API documentation.

### Systems Engineer

- Provisioned and setup VMs for the service team with the appropriate software and access, using GCP Compute and AWS EC2.
- Used Docker to containerize various services, and Docker Compose to orchestrate them locally.
- Used Kubernetes to orchestrate services in production.
- Wrote python scripts to address adhoc internal & external requirements and orchestrate processing.
- Migrated the database from Google Cloud Datastore to PostgreSQL for better maintainability

## Protium                                                       April 2021 - March 2022
### Full-stack Developer

- Backend development
  - Integrated custom functionality on top of an open-source Process Orchestration Platform
  - Handled basic custom authentication using an open-source Identity & Access Management Platform
- Front-end Development
  - Developed a prototype web application, a mobile application, and custom forms using Formio, React, and React-Native

## Dune                                                          January 2017 - May 2017
### Back-end Developer

- Implemented custom video filters using OpenGL in C++
- Exposed python APIs for these features, using Boost

# Education

## National Institute of Technology, Calicut. GPA: 8.18 / 10        June 2013 - May 2017

# Skills

## Languages & Frameworks

- **Front-end:** Javascript & Typescript, React, Redux, React-Router, NodeJS, Webpack, Esbuild, Jest, Testing Library, React Joyride
- **Back-end / Scripting:** Rust, Python, Java
- **Design:** Figma, Penpot, Mockflow

## Tools & Infrastructure

- **Containers & Orchestration:** Docker, Kubernetes, Docker Compose, Jenkins
- **Databases:** PostgreSQL, Google Cloud Datastore, NoSQL
- **Tools & Cloud Platforms:** GCP, AWS, Git