

## EVAT Project Onboarding Guide

Congratulations on joining the EVAT project! We're thrilled to have you on board as we work together to revolutionize electric vehicle (EV) adoption in Australia with adaptive tools and data-driven insights. This guide will equip you with specific details, tools, and processes needed to contribute effectively.

### 1. About the EVAT Project

#### 1.1 Mission

Our mission is to enhance EV adoption in Australia by leveraging advanced data science techniques and app development tools to provide a seamless user experience, optimize charging infrastructure, and support sustainable transportation.

#### 1.2 Core Objectives

- Predictive Analytics: Develop models to forecast EV charging demand and optimize station placements.
- User Insights: Provide EV users with real-time, personalized recommendations for cost optimization and charger availability.
- Smart Charging: Enhance charger efficiency and ensure maximum uptime and availability.
- Environmental Impact: Analyze and report on carbon emissions reduced through EV adoption, highlighting environmental benefits.

#### 1.3 Key Features

- Interactive App: A user-friendly application that helps locate chargers, plan EV routes, and track environmental impact metrics.
- AI-Powered Chatbot: Offers instant assistance, answers FAQs, and provides real-time recommendations. **(New feature to be implemented).**
- Data-Driven Decision-Making: Utilize AI/ML models to provide actionable insights and improve charging infrastructure.

### 2. Our Team Structure

#### 2.1 Teams and Sub-Branches

- Data Science Team:

- Analyze user behavior, develop predictive models, and process datasets.
- Leadership: B Goutham Krishna
- Programming Tools: Python (Jupyter, Google Colab) and MongoDB for data management.
- App Development Team:
  - UI/UX Design Team: Focus on creating intuitive interfaces and enhancing user experience.
  - Frontend Team: Build user-facing components using React Native.
  - Backend Team: Manage server-side logic and ensure seamless communication with the database.
- Leadership: Mitchell Day

### 3. What to Expect in Your First Two Weeks

#### 3.1 Week 1: Onboarding & Learning

- Technical Setup:
  - Gain access to MS Teams, MS Planner, GitHub repository, and MongoDB server.
  - Set up Android Studio and React Native for app testing.
  - Install Python and Jupyter for data analysis tasks.
- Get Familiar:
  - Review the EVAT app prototype and suggest design improvements if relevant.
  - Access shared resources on MS Teams and Google Drive for documentation and project plans.

#### 3.2 Week 2: Upskilling

- Workshops: Attend GitHub and tool-specific workshops for hands-on learning.
- Mini-Tasks: Complete introductory tasks to gain confidence in tools like Power BI for data visualization or React Native for app development.

### 4. Tools & Resources

#### 4.1 Tech Stack and Tools

1. Project Management:
  - MS Planner: Central hub for tracking tasks and timelines.
  - Weekly Stand-ups: Regular meetings to discuss progress and resolve blockers.
2. Prototyping:
  - EVAT App Prototype: Available for review and refinement. Contact team leads for edit permissions.
3. Development Tools:

- GitHub: Team repository for version control. Workshops are scheduled to familiarize new members.
  - Android Studio: Test app features using an emulator.
  - React Native: Primary framework for frontend development.
4. Data Science Tools:
- Python: For modeling and analysis.
  - MongoDB: Database for charger information and usage metrics.
  - Power BI: Interactive dashboards for tracking progress and insights.
5. Cloud Platforms:
- Google Maps Cloud Platform: Advanced APIs for charger locations and routing.
  - AWS/GCP: Deployment and hosting backend services.

## 5. How We Work

### 5.1 Workflow

- Agile Methodology:
  - Work in sprints (2-3 weeks) with defined deliverables.
  - Participate in sprint planning and retrospectives.
- Code Collaboration:
  - Use GitHub for centralized version control. Ensure clear commit messages and adhere to coding standards.
- Documentation:
  - Maintain detailed documentation in MS Teams and SharePoint.

## 6. Deployment & Integration

- Backend Deployment:
  - Current services are hosted on AWS, with plans to migrate to GCP for enhanced scalability.
- Docker Hub: Utilize Docker for containerized deployments.
- Interactive Dashboards: Use Power BI for monitoring progress and data insights.

## 7. How to Succeed

- Be Proactive: Take initiative in tasks and suggest improvements.
- Collaborate: Maintain open communication across teams.
- Upskill: Use internal resources and online courses to expand your knowledge.
- Document Your Work: Ensure your contributions are well-documented for transparency.

## 8. Contact Points

- Team Lead: For project-specific queries.
- Senior and Junior Leads: For access and setup issues, queries on tasks and validation/confirmation on a particular task.
- Mentor: For guidance on technical and strategic challenges.

## Closing Note

Your technical skills and innovative ideas are invaluable to the EVAT project. Together, we can achieve significant milestones in advancing EV adoption. Let's create a sustainable future through teamwork and technology!