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| **Executive Summary** | |
| **Project Name** | Career Guidance and Job Recommendation App Using AI |
| **Date** |  |
| **Prepared by** | Nithin Aakash V R , Abshiek J J, Brindha B V |
| Include a short summary of the purpose, key findings, and recommendations of the feasibility study. | |
| **Introduction** | |
| **Background** | Career guidance is critical for students as it helps them navigate their career paths in a complex and dynamic job market. This project introduces an AI-based application to analyze user data and offer personalized career recommendations, thus providing clarity and direction to students who are unsure about their professional futures. |
| **Objectives** |  To develop an AI-powered app that assists students in making informed career decisions.   To use ML algorithms to generate personalized career and job recommendations.   To address challenges in traditional career counseling by providing scalable, AI-driven guidance. |
| **Scope** | This feasibility study will examine the technical, operational, and financial viability of developing the Career Guidance App. It will cover technical requirements, market trends, financial projections, and operational challenges. |
| Provide context for the project and define what the feasibility study will cover. | |
| **Technical Considerations** | |
| **Available Technologies** |  AI and Machine Learning (ML) frameworks such as Decision Trees and K-Nearest Neighbor (KNN) algorithms will be used for career recommendation and prediction.   Database management systems to handle user data including academic performance, skills, and preferences. |
| **Required Resources** |  |
| **Manpower**  Data Scientists and AI/ML experts for model development.   Front-end and back-end developers for app creation. | |
| **Equipment** Cloud-based servers for data processing and model training. | |
| **Materials**  Labeled datasets for training ML algorithms. | |
| **Technical Skills Needed** |  Proficiency in machine learning, AI, and data analytics.   Experience with mobile/web app development. |
| Evaluate the technical aspects, including the resources and technologies needed. | |
| **Market Survey** | |
| **Customer Preferences** | Many students express difficulty in making career decisions due to a lack of advisory support. The proposed app will address these concerns by offering personalized, data-driven career guidance. |
| **Market Trends** | The demand for AI-driven career guidance tools is growing as the education sector adopts digital platforms to enhance student decision-making. |
| **Competition Analysis** | Existing career counseling services are largely manual or lack AI capabilities. The app will differentiate itself by offering automated, real-time career advice, reducing reliance on human advisors |
| Gather data through surveys, interviews, and existing market reports. | |
| **Plan of Action** | |
| **Timelines** |  Phase 1: Data Collection and Preprocessing   Phase 2: Model Training and Testing   Phase 3: Front-end and Back-end Development   Phase 4: App Deployment and Testing |
| **Milestones** |  Completion of data collection and preprocessing.   Successful training of AI/ML models with 90% accuracy.   User-friendly app interface development. |
| **Resource Allocation** |  Allocate 40% of resources for AI/ML development.   30% for app development.   20% for testing and quality assurance.   10% for marketing and deployment. |
| **Contingency Plans** |  In case of technical challenges in AI model accuracy, external experts will be consulted.   Delays in data processing will be mitigated by sourcing additional computational resources from cloud services. |
| Outline the project’s game plan and prepare for potential roadblocks. | |
| **Operational Requirements** | |
| **Workflow** |  Data is collected from users through the app (academic records, career interests).   AI/ML models process the data and provide tailored recommendations.   Continuous updates based on user feedback and job market trends. |
| **Supply Chain** |  Data handling through secure, cloud-based servers.   Regular updates to AI models based on changing career landscapes |
| **Quality Control** |  Testing for accurate recommendations.   Regular updates to ensure relevance and precision. |
| Determine the operational requirements and how the project will fit into existing operations. | |

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| **Financial Projections** | |
| **Forecasted Income** |  Revenue through premium subscriptions for enhanced services (e.g., personalized job matching, detailed career paths).   Partnerships with educational institutions for bulk access. |
| **Forecasted Expenses** |  Development costs (AI/ML models, app development).   Operational costs (cloud services, server maintenance). |
| **Projected Profitability** | Assuming a user base of 10,000 students with a 10% conversion rate to premium users, projected revenue in the first year could be $120,000. |
| Use historical data and industry benchmarks to make financial projections. | |
| **Findings and Recommendations** | |
| **SWOT Analysis** |  **Strengths**: Personalized, AI-driven recommendations, continuous learning through user feedback.   **Weaknesses**: High initial cost and technical complexity.   **Opportunities**: Growing demand for digital career guidance tools.   **Threats**: Potential competitors entering the AI-guided career advice space. |
| **Risk Assessment** | Risks include potential data privacy issues and the complexity of maintaining up-to-date, accurate datasets |
| **Key Metrics** | User engagement, app accuracy (via feedback), and conversion to premium services. |
| **Projected ROI** The project is expected to break even within 2 years with a 20% profit margin thereafter. | |
| **Cost-Benefit Analysis The benefits of improved job placement rates and user satisfaction outweigh the initial costs, making the**  **project viable.** | |
| **Market Penetration Rates** | |
| Evaluate the collected data and metrics to assess the project’s feasibility. | |
| **Decision** | The project is technically feasible with moderate initial costs and has strong market potential. Based on the market demand and financial projections, the recommendation is to **proceed** with development |
| **Justification** | Given the strong market demand, feasible technical implementation, and promising financial projections, the  recommendation is to proceed with the development of the AI Career Guidance and Job Recommendation  System. |
| Make the final decision (go/no-go decision) based on ROI, market demand, operational and technical constraints. | |