**A) Technological Requirements**

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| --- | --- | --- | --- |
| **Technology Type** | Technology Choice | Pros | Cons |
| Database | SQLite/Local PostgreSQL | Lightweight, ideal for local storage. PostgreSQL for more robust needs. | SQLite has limitations in high concurrency; PostgreSQL requires more setup. |
| Programming Language | Python | Strong AI/ML libraries support, good for scripting and automation. | Not the fastest language; performance might be an issue for very large datasets. |
| AI/ML Framework | Scikit-learn/TensorFlow Lite | Scikit-learn is great for classical ML; TensorFlow Lite for localized deep learning. | Scikit-learn lacks deep learning capabilities; TensorFlow Lite might be limited in model complexity. |
| Local Server Framework | Flask | Lightweight, more straightforward than Django for local deployment. | Not as feature-rich as Django; less scalable for large applications. |
| Deployment | Standalone Application | Direct deployment on local hardware; no need for cloud-related complexities. | Requires handling multiple local environments; update distribution can be challenging. |
| Version Control | Git with GitLab/Bitbucket | Effective for tracking changes; GitLab/Bitbucket offers additional project management tools. | Requires understanding of version control concepts and regular maintenance. |
| Data Synchronization | Custom Sync Service | Allows for tailored data synchronization between local and central systems. | Development complexity; potential sync conflicts; requires robust error handling. |
| Security | Local Network Security, Data Encryption | Ensures data security within the local network and during any data transfer. | Local security requires rigorous setup and maintenance; potential vulnerability if not managed correctly. |
| Front-end | Electron for Desktop Apps | Allows for creating native applications for desktop; good integration with web technologies. | Adds complexity in development compared to web apps; larger application size. |
| Hardware | High-Performance Local Servers | Necessary for running AI models locally and handling large datasets. | Significant upfront investment; requires space and maintenance. |

### B) Learning Plan

1. **Gorkem Sari - Software Developer (Lead)**
   * Focus Areas: Advanced Python programming, Flask framework, local database management.
   * Start-End Date: 04-09-2023 to 28-02-2024
   * Current Skill: 60%
   * Resources:
     1. **Advanced Python Programming**
        1. **Courses:**
           + Coursera: "Python 3 Programming Specialization" by the University of Michigan.
           + Udemy: "Advanced Python Programming."
        2. **Books:**
           + "Fluent Python" by Luciano Ramalho.
           + "Effective Python: 90 Specific Ways to Write Better Python" by Brett Slatkin.
     2. **Flask Framework**
        1. **Courses:**
           + Udemy: "Python and Flask Bootcamp: Create Websites using Flask!"
           + Pluralsight: "Building Web Applications with Flask."
        2. **Books:**
           + "Flask Web Development" by Miguel Grinberg.
     3. **Local Database Management**
        1. **Tutorials:**
           + SQLite Tutorial for Python developers.
           + SQLAlchemy ORM tutorials for Flask applications.
        2. **Projects:**
           + Building a Flask application with local SQLite database.
           + Implementing a CRUD application using Flask and SQLAlchemy.
2. **Jaqueline Duarte - AI and Data Science Expert**
   * Focus Areas: TensorFlow Lite, Scikit-learn for AI/ML model development.
   * Start-End Date: 04-09-2023 to 28-02-2024
   * Current Skill: 65%
   * Resources:
     1. **TensorFlow Lite**
        1. **Documentation:**
           + Official TensorFlow Lite Guide.
        2. **Courses:**
           + Coursera: "TensorFlow Lite for Mobile and Edge Devices."
     2. **Scikit-learn for AI/ML Model Development**
        1. **Courses:**
           + DataCamp: "Supervised Learning with scikit-learn."
           + Udemy: "Machine Learning A-Z™: Hands-On Python & R In Data Science."
        2. **Books:**
           + "Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow" by Aurélien Géron.
3. **Igor Oliveira - UX/UI Designer**
   * Focus Areas: Electron framework for desktop app development, UI/UX design principles.
   * Start-End Date: 04-09-2023 to 28-02-2024
   * Current Skill: 50%
   * Resources:
     1. **Electron Framework for Desktop App Development**
        1. **Tutorials:**
           + Official Electron Documentation.
           + Udemy: "Electron From Scratch: Build Desktop Apps With JavaScript."
        2. **Projects:**
           + Building a sample desktop application using Electron.
     2. **UI/UX Design Principles**
        1. **Courses:**
           + Coursera: "UI / UX Design Specialization" by California Institute of the Arts.
           + Interaction Design Foundation courses.
        2. **Books:**
           + "Don't Make Me Think" by Steve Krug.
           + "The Design of Everyday Things" by Don Norman.
4. **Valunchanut Simaroj - Project Manager**
   * Focus Areas: Agile project management methodologies, GitLab/Bitbucket for version control and project tracking.
   * Start-End Date: 04-09-2023 to 28-02-2024
   * Current Skill: 65%
   * Resources:
     1. **Agile Project Management Methodologies**
        1. **Courses:**
           + Coursera: "Agile Development Specialization" by the University of Virginia.
           + LinkedIn Learning: "Becoming an Agile Project Manager."
        2. **Books:**
           + "Agile Project Management with Scrum" by Ken Schwaber.
     2. **GitLab/Bitbucket for Version Control and Project Tracking**
        1. **Tutorials:**
           + Official GitLab and Bitbucket Documentation.
           + Udemy: "GitLab CI: Pipelines, CI/CD and DevOps for Beginners."
        2. **Workshops:**
           + Local or online workshops on GitLab/Bitbucket integration with Agile methodologies.