**PROJECT NAME:IR-SEE**

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| TASK # | PROJECT TASKS WHICH REQUIRE SOFTWARE TOOL SUPPORT |
| 1 | USER AUTHENTICATION SYSTEM |
| 2 | DATABASE FOR USER DATA AND PROGRESS |
| 3 | UI/UX DESIGN |

JavaScript or TypeScript would be an ideal option for the frontend, especially since they can be easily integrated into Firebase SDKs. Since these languages ​​are directly supported by browsers and compatible with Firebase, they can also provide compatibility on our platform.  
  
For the back-end, we can use JavaScript or TypeScript as in the front-end for a serverless approach like Firebase Cloud Functions. For these reason it is a great option for building the backend of our app, providing auto-scaling and easy access to Firebase resources.

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| SOFTWARE TOOLS FOR TASK 1:  Tool Cost/Training/Functionality Data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tool | OKTA | AUTH0 | Azure Active Directory | Firebase Authentication | | Cost | $4000 | $1400 | $0 | $0 | | Training Days | 14 | 10 | 16 | 7 | | Functionality | 90 | 80 | 75 | 65 |   Normalized Cost/Training/Functionality Data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tool | OKTA | AUTH0 | Azure Active  Directory | Firebase  Authentication | | Cost | 100 | 35 | 0 | 0 | | Training Days | 87.5 | 62.5 | 100 | 43.75 | | Functionality | 100 | 88.8 | 83.3 | 72.2 |   Normalized Tool Graph  Which tool has been selected? Why?  We are stuck between Firebase and Azure because there is a huge price difference compared to their competitors. We prefered Firebase because the training period is shorter and it is an ecosystem we know from the database task . In addition, the ease of use and reliability offered by Google was effective to sustain our project.  GCP offers services such as Google Cloud AI Platform and Google Cloud Vision API, which can be integrated with YOLO.Google Cloud AI Platform provides tools to build, train, and deploy machine learning models. Cloud Vision API provides pre-trained models for image recognition tasks that can be used with YOLO. |

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| SOFTWARE TOOLS FOR TASK 2: |
| Tool Cost/Training/Functionality Data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tool | AWS | MySQL | Firebase Realtime Database | Azure | | Cost | 400$ | 150$ | 350$ | 600$ | | Training Days | 23 | 10 | 14 | 21 | | Functionality | 80 | 60 | 75 | 85 |   Normalized Cost/Training/Functionality Data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tool | AWS | MySQL | Firebase  Realtime  Database | Azure | | Cost | 67.7 | 25 | 58.3 | 100 | | Training Days | 100 | 41.6 | 60.8 | 91.3 | | Functionality | 94.1 | 70.6 | 88.2 | 100 |   Normalized Tool Graph    Which tool has been selected? Why?  The fact that it can be learned in a short time compared to other options , it offers a high functionality compared to its price and we know the ecosystem from authentication task caused us to prefer Firebase. In addition, as a Google-backed platform, it offers reliability and continuous innovation. While other cloud services such as Microsoft Azure and Amazon Web Services (AWS) offer a wide range of features, Firebase's ease of use and tools specifically designed for mobile/web-focused projects made it a more logical choice for us. |

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| SOFTWARE TOOLS FOR TASK 3:  Tool Cost/Training/Functionality Data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tool | Figma | Adobe XD | Sketch | InVision Studio | | Cost | 60$ | 58.4$ | 99$ | 60$ | | Training Days | 3 | 4 | 2 | 4 | | Functionality | 94 | 82 | 78 | 86 |   Normalized Cost/Training/Functionality Data   |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tool | Figma | Adobe XD | Sketch | InVision  Studio | | Cost | 60.6 | 58.98 | 100 | 60.6 | | Training Days | 75 | 100 | 50 | 100 | | Functionality | 100 | 87.2 | 82.9 | 91.4 |   Normalized Tool Graph  Which tool has been selected? Why?  With its user-friendly interface, powerful collaboration features and web-based structure, Figma is an ideal choice for both UX and UI design. It is also accessible on any platform and updates are provided automatically, making the design process efficient and easy, and in terms of price performance, Figma was the ideal choice for our project. |