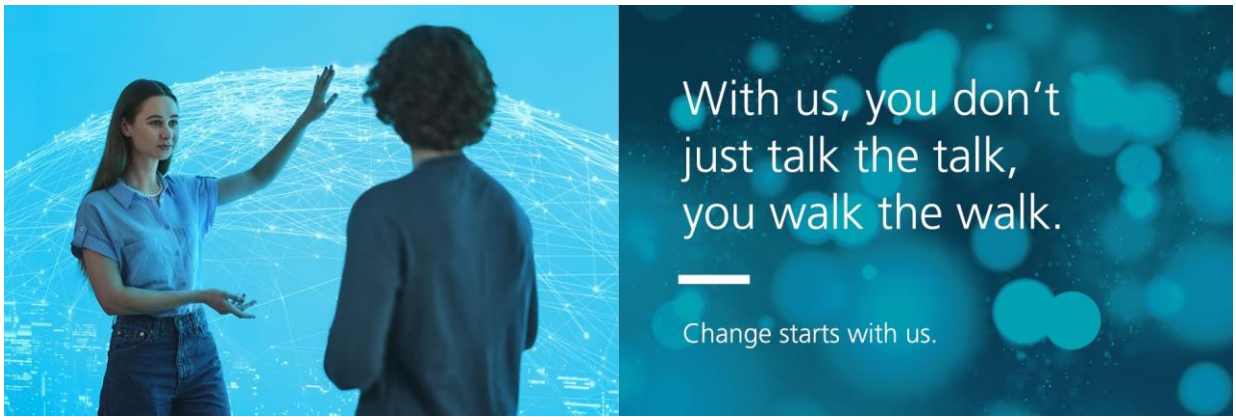
Fraunhofer IIS



Working Student for iOS-Based 3D Scanning App Development

The Fraunhofer-Gesellschaft (www.fraunhofer.com) currently operates 76 institutes and research institutions throughout Germany and is the world's leading applied research organization. Around 32 000 employees work with an annual research budget of 3.4 billion euros.

Our department «**Moving Pictures Technologies**» is developing an iOS scanning application designed to capture detailed images of 3D objects and scenes using an iPad. Leveraging Apple's ARKit framework, this app can perform high-quality scans of various environments by utilizing ARKit's advanced capabilities, including scene understanding, depth data, and motion tracking. These features provide a robust foundation for applications in 3D reconstruction, augmented reality, computer vision, and 3D visualization.

We are seeking a motivated student to enhance our current app with new functionalities and improved performance. You will work on refining the app's ability to capture and process high-quality 3D data, integrating ARKit's latest features, enhancing the user experience, and incorporating advanced scanning capabilities. This topic can also be pursued as a bachelor thesis, providing an opportunity for in-depth research and development.

You love to work with computers? You have experience in either Java or C++?
Then have a look at our offer!

What you will do

- You will improve and extend our iOS scanning app's functionality for capturing objects and scenes using an iPad
- You will work on refining the app's user interface to streamline the scanning process and improve usability
- You will integrate new algorithms for optimized 3D data capture and processing
- You will collaborate with our team to document experiments, improvements, and insights gained during development
- You will learn best practices for real-time capture, image processing, and app optimization to deliver high-quality scans

What you bring to the table

- You are currently studying computer science, software engineering, information and communication technologies, or a related field
- You have experience in programming languages such as C++ or Java and are eager to learn Swift and/or Objective-C to develop a solid skill set in iOS app development
- You are interested in working with 3D data, image processing, and enhancing real-time applications

Skills that could be beneficial:

- Basic knowledge of image processing and 3D computer vision concepts, such as camera calibration and depth estimation
- Proficiency in Git, Xcode, and other development tools commonly used in iOS projects
- Familiarity with Apple's ARKit for 3D object capture and visualization
- An eye for UI/UX design to enhance the user experience of the scanning app

What you can expect

- **Flexible** working hours
- **Open** and **friendly team work**
- **Varied** tasks with room for **creativity**
- Exciting **seminars** and **events**
- **Networking** with scientists

- **Active contribution** in applied research
- **Interesting** and **innovative** projects
- **Mentoring program** »josephine®« for talented female students

Weekly working hours are determined by agreement. You can start from now on (as a student assistant from **10** up to **20** hours a week). You can reduce your hours before exams and increase them during semester breaks. You can flexibly determine the working days. After your studies, you have the option of working with us full or part time.

We would be happy to offer you the opportunity to write a bachelor's or master's thesis in cooperation with us in the above-mentioned subject area. The thesis will be assigned and carried out in accordance with the rules of your university. For this reason, please discuss the thesis with a professor who can advise you over the course of the project. There is also the possibility to carry out your student thesis in this context.

If you have any questions regarding this position, please contact:
Ashutosh Mishra (ashutosh.mishra@iis.fraunhofer.de)
Nico Prappacher (nico.prappacher@iis.fraunhofer.de)

We value and promote the diversity of our employees' skills and therefore welcome all applications - regardless of age, gender, nationality, ethnic and social origin, religion, ideology, disability, sexual orientation and identity.

Interested?
Apply online now (PDF: cover letter, CV, transcripts). We look forward to getting to know you!

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Requisition Number: xxxxx Application Deadline: none Location: Erlangen