

## Internship Evaluation & Reporting

Thank you for taking the time to complete this form, this evaluation will be used to assess the student's participation in the internship program.

Supervisors, using the form below please evaluate the student who interned with your organization, institution, or business. You can fill out this form electronically or you can fill it manually but eventually it must be signed and stamped from the company's side.

Please note that part I & III should be completed by the intern, part II should be completed by the direct supervisor in the company.

### Part I. GENERAL INFORMATION – STUDENT'S INPUT

#### Student Info:

Student Name: Omar Essam Mohamed Mahmoud GUC Student ID No.: 43-4287  
Faculty: MET Major: CSEN  
Student Mobile No.: +201149834935

#### Internship Info:

Company Name: German Research Center for Artificial Intelligence, DFKI GmbH  
Core Industry/Business: Artificial Intelligence Country: Germany  
Supervisor Name: Michael Lorenz Supervisor Job Title: Researcher  
Supervisor Tel. No.: +49 631 205 3332 Supervisor Mobile No.: \_\_\_\_\_  
Supervisor E-mail: Michael.Lorenz@dfki.de Training Department(s): Augmented Vision  
Source of internships: (1) SCAD office (2) on my own ☒ Referrals from GUC TA/Dr. (4) Recruitment website (5) others:  
Work Place: ☒ Organization (2) Head Office (3) Branch (4) Factory (5) Site (6) Others:

### Part II. EVALUATION AND COMMENTS – DIRECT SUPERVISOR'S INPUT

Period of Internship (dd/mm/yyyy) (dd/mm/yyyy)  
From: 01 / 09 / 2021 To: 31 / 10 / 2021

Internship nature (Enrollment Status)

- ☐ Part time Please specify, no. of Days per week: \_\_\_\_\_ hours per day : \_\_\_\_\_  
☒ Full time Please specify, no. of Days per week: 5 hours per day : 8

**Company Stamp**  
Deutsches Forschungszentrum  
für Künstliche Intelligenz GmbH  
Trippstadter Straße 122  
Postfach 2080  
D-67608 Kaiserslautern

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Serial no.	SCAD Comment	Academic Reviewer Comment	Academic Reviewer Signature
			<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected Reason of rejection:  Signature:

Please evaluate student's performance by marking the appropriate box:

For each of the following aspects, please mark the box in the rating scale that most closely corresponds to your evaluation of the profile of the student during the internship period. Please also feel free to offer comments and suggestions for changes and improvements in the space provided at the end of the form.

**1=Unsatisfactory      2=Below Average      3=Satisfactory      4=Above Average      5=Excellent**

	1	2	3	4	5	NA
<b>Skills &amp; Professional Attributes</b>						
Ability to adapt to change					X	
Analytical skills					X	
Collecting data/ research data skills				X		
Creativity				X		
Follow up skills						X
Interpersonal skills with peers, supervisors, and clients					X	
Problem solving					X	
Punctuality				X		
Reporting skills			X			
Responsibility and accountability						X
Stress handling						X
Taking initiatives						X
Teamwork						X
Time management				X		
Other:						
<b>Technical Background</b>						
Technical Knowledge					X	
Compatibility of technical skills with the job					X	
Other:						
<b>Command of Languages</b>						
Arabic						X
English			X			
German						X
Other:						

**1=Unsatisfactory      2=Below Average      3=Satisfactory      4=Above Average      5=Excellent**

	1	2	3	4	5	NA
<b>Computer Programs &amp; Databases</b>						
Please use space below in specifying the program/software used during the internship and evaluate student's performance accordingly						
Python				X		

<b>Overall Evaluation of Student's performance and profile</b>					
Unsatisfactory	Improvement needed	Meets expectations	Exceeds expectations	Exceptional	NA
		X			

**General Comments & Recommendations:** (kindly mention intern potentials, areas of further development or technical constraints encountered during the internship period)

Mr. Mahmoud worked on quite an advanced topic that require a lot of mathematical background. He was able to cope with the topic. He understood it fast, and was able to implement the algorithm presented. He tested the algorithm using data from our lab. His was able to present his topic and work properly. Mr. Mahmoud explained the mathematical notations in a clear way. We would suggest to further improve presentation skills.

	Yes	No	Maybe
Do you think similar candidates would fit in the Organization culture and qualify for job needs?	X	<input type="checkbox"/>	<input type="checkbox"/>

**Student Signature:**

omar/Elson

**Date:**

29.5.2022

**Supervisor Signature:**

i. A. M. A.

**Date:**

24.05.2022

### Part III. INTERNSHIP REPORT – STUDENT’S INPUT

- This report has to be prepared by the student, it must be prepared and written in a **computerized** format, submitting the report in hand written format will not be accepted.
- Kindly refer to the Internship Report writing Guidelines on the GUC intranet – SCAD office folder.
- This report will be reviewed and evaluated from internal faculty members.

**Internship Title:** Research intern at augmented vision department

**Company / Organization Name:** DFKI (*Deutsches Forschungszentrum für Künstliche Intelligenz*)

**Introduction:** The main reason of this report is to describe the internship in DFKI briefly, it covers different aspects that describe my work in the company, I worked in the augmented vision department, the aim of the internship was to work on a part of project with a big team to make a suit which describes the movement of the person wearing it, the report is divided to the organization description, internship performed tasks in which I describe my work, internship evaluation in which I evaluate the internship and lastly the conclusion.

**Company / Organization Description:** The **German Research Center for Artificial Intelligence** (German: *Deutsches Forschungszentrum für Künstliche Intelligenz*, **DFKI**) is one of the world's largest nonprofit contract research institutes for software technology based on artificial intelligence (AI) methods. DFKI was founded in 1988, and has facilities in the German cities of Kaiserslautern, Saarbrücken, Lübeck, Oldenburg, Osnabrück, Bremen, Darmstadt and Berlin. DFKI conducts contract research in virtually all fields of modern AI, including image and pattern recognition, knowledge management, intelligent visualization and simulation, deduction and multi-agent systems, speech- and language technology, intelligent user interfaces, business informatics and robotics.

**Internship Performed Tasks:** At the start I started learning about Kalman filter and Its applications and then I started applying my knowledge by doing some tasks on lab data using linear kalman filter and non-linear kalman filter after that, then I started working on the actual project which was estimating the position vector of a joint in the coordinate space of inertial measurement unit in which I used python as my scripting language and I used some libraries like Autograd, I also implemented my own library to calculate the Jacobean matrix and compare it with the Autograd result, I also used the DFKI servers to run my code to get better tuning parameters for my extended kalman filter algorithm, and I also tried to use reinforced learning to get better parameters.

**Internship Evaluation:** I gained a lot of skills during my internship, I worked in a company in another country which provided me with communication skills and experience, I also became better at using python and its libraries and gained a more solid math background. The internship did meet my expectations. I think the internship made me better at the professional life and the technical knowledge will help me with future work. I think it relates to my studies in some courses, because my internship was dependent on math background I needed a good math back ground which I had because of Math2 and Math3.

**Conclusion:** In conclusion, my journey at DFKI was very fruitful. I have enriched my abilities in learning and applying my skills and knowledge efficiently. I think this opportunity will help me a lot in my future career and will help me in landing respectable job opportunities in the future and it helped me work on real data for the first time which is a great experience. This internship has pushed me into the field of augmented reality which is a growing field in Egypt and other countries and is a very interesting field.

Please rate your satisfaction with the internship experience.

☒ Very satisfied      ☐ Somehow satisfied      ☐ Neutral      ☐ Somehow dissatisfied      ☐

Very dissatisfied

Would you recommend this internship to other colleagues?

☒ Yes      ☐ No      ☐ Maybe

**References:** (If any external sources are used, provide references for any information quoted)

**Appendices:** (Upon availability, charts, pictures, etc.)

### **Disclosure / Confidentiality Agreement**

This agreement is to acknowledge that the information provided by any company / organization during the internship is unique to this business and confidential.

Therefore, anyone reading this agreement agrees not to disclose any of the information provided during the internship without notifying & taking the employer's / supervisor's approval.





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Researcher**

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Kaiserslautern, 24.05.2022

Dear Sir/Madame,

I would like to confirm that Mr. Omar Essam Mohamed Mahmoud, born on 29.10.1999, worked under the supervision of Mr. Michael Lorenz on his bachelor thesis from 01.06.2021 until 31.08.2021. Followed by a 2-month internship from 01.09.2021 until 31.10.2021.

He worked in the Augmented Vision Department at DFKI Kaiserslautern, Germany.

Best regards,

Mohamed Selim

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**Deutsches Forschungszentrum für  
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**Firmensitz**  
Kaiserslautern

Weitere Standorte und Betriebsstätten:  
Saarbrücken, Bremen, Osnabrück,  
Oldenburg, Berlin, Lübeck, St. Wendel

**Geschäftsführung**  
Prof. Dr. Antonio Krüger (Vorsitzender)  
Helmut Ditzer

**Vorsitzender des Aufsichtsrats**  
Dr. Gabriel Clemens

Amtsgericht Kaiserslautern HRB 2313  
USt-ID-Nummer DE 148 646 973  
Steuernummer 19/672/50006

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