

Evaluation of Project work
 Bachelor thesis
 Master thesis

Step 1: Systematic review

Name: **Jan Kupeček**
 Matriculation number / Cours: **207017 / Hochschule Zittau - Görlitz / Mechatronics**
 Title of work: **Bauteilerkennung mit Kamerasystemen - Griff in die Kiste**
Part recognition with camera system - bin picking
 Supervisor: **Dipl.-Ing. Fritz Klenk**

Criterion	Fail 0 - 49 %	Enough 50 - 57 %	Satisfactory 58 - 74 %	Good 75 - 90 %	Very good 91 - 100 %	Weight in the range	Result in %	Weighted points
Area	Elaboration (55% Weight)							
Expert contribution (consideration of difficulty)	insufficient elaboration, only solution	some partial problems were solved or partially solved	Part problems were solved, solutions critically analyzed, expert assessment satisfactory	Task have been well solved or proven their non-solvability	Task was completely solved and additional aspects processed	10	90%	8,3
Use of expertise	Low awareness of the prior art	Basic knowledge, but significant gaps in the knowledge	Basic knowledge, but with moderate gaps in the knowledge	Good basic knowledge, only details missing	Extensive knowledge, very good expertise	10	90%	8,3
Use of methods and tools	Unplanned approach, target of progress hardly recognizable	Partially adequate methods and tools	Incomplete use of methods and tools	Good methodology, alternatives were examined, good practice	Exemplary methodology, tools appropriate to the task, adequate critical reflection	10	90%	8,3
Feasibility of the result	Result practically unusable for purposes of the task	Result used as basic for practical solution	Result can be implemented with modifications in the practice	Good result, implemented with minor modifications	Very good result, implementable or already implemented without modifications	10	90%	8,3
Creativity	No own ideas, unable to transfer own solutions on new tasks	No own ideas, elementary application of own solutions to a problem	Practically used only own known ideas, successful application of principles of solutions	Introduced their own ideas and partially implemented	Many new ideas, with new successful solutions	10	90%	8,3
Economic review	Little or no business thinking in the solution	Partial economic thinking in approaches or in key aspects	Economic thinking in approaches or in key aspects	Good general economic thinking in the entire solution	Very good economic thinking through the solution, relationships considered	10	90%	8,3
Area	Scientific work (45% Weight)							
Independence, initiative	Extensive support needed	Certain independence, strong support necessary	Majority of independent work, low support necessary	Independent realization, good own initiative	Emphasized independence and self-initiative	10	85%	7,7
Systematics	No recognizable systematic	Significant deficiencies in the systematic approach	Minor deficiencies in the systematic approach	Good systematic	Target-oriented systematic, task-appropriate and efficient	10	90%	8,1
Documentation	Significant deficiencies in the documentation, confused, incomplete	Sufficient documentation, understandable	Satisfactory documentation, understandable, meaningful structure	Good documentation, complete, clearly structured	Exemplary documentation, complete and apposite	10	90%	8,1
Literature review	Hardly any literature	Moderate literature recherche, often secondary literature, non-specific basis or randomly chosen online sources	Related works und primary literature, qualified online sources	All significant primary and secondary literature and adequate basic works, used magazines and online sources	Generally involving current articles from all relevant journals and relevant online sources	10	90%	8,1
Using the literatur	Citation without using a comment to reference literature	Assignment of central statements from literature, no discussion	Multiple assignments of most statements with literature, discussion of literature at significant statements	Thorough assignment of all statements, appropriate discussion of literature, partial reflexion	Thorough, focused and critical reflection of literature, developing their own interpretation / solution	10	90%	8,1
	0 - 49 failed	50 - 57 enough	58 - 74 satisfactory	75 - 90 good	91 - 100 very good			
Sum of weighted points (rounded)							1,0 with 100 points 4,0 with 50 points	90
Mark proposal								1,6

- Evaluation of Project work
 Bachelor thesis
 Master thesis

Step 2: Explanation of rating

Name: **Jan Kupeczek**
 Matriculation number / Cours: **207017 / Hochschule Zittau - Görlitz / Mechatronics**
 Title of work: **Bauteilerkennung mit Kamerasystemen - Griff in die Kiste**
Part recognition with camera system - bin picking
 Supervisor: **Dipl.-Ing. Fritz Klenk**

Area	Elaboration
Expert contribution	Jan found reliable information about new industrial topic and its application possibilities. He compared several manufacturers and their capabilities and picked the suitable ones for given task. Then supplied with the equipment he created a robot and camera program which works in synergy.
Use of expertise	Jan had shown technical knowledge during investigation of the bin picking possibilities and creation of the functional solution.
Use of methods and tools	Jan's approach was purposeful with continuous progress.
Feasibility of the result	Jan's work has shown potential of bin picking task with possible approaches and also some hidden problems that can occur. Created programs can be easily modified for new application.
Creativity	Jan has shown interest in the profession, ability to learn new things and also skills in technical thinking.

- Evaluation of
- Project work
 - Bachelor thesis
 - Master thesis

Step 2: Explanation of rating

Name: **Jan Kupeczek**

Matriculation number / Cours: **207017 / Hochschule Zittau - Görlitz / Mechatronics**

Title of work: **Bauteileerkennung mit Kamerasystemen - Griff in die Kiste
Part recognition with camera system - bin picking**


Supervisor: **Dipl.-Ing. Fritz Klenk**

Area	Fortsetzung - continuation
Economic review	Jan gained information about prices of individual vision systems which can be used for future tasks.
Area	Scientific work
Independence, initiative	Jan processed individually with occasional assistance in guiding of his next steps or technical support.
Systematics	Jan's approach was systematic and focused on functional solution.
Documentation	Documentation contains principles of 3D image acquisition methods and their potential. Compares several manufacturers of 3D technology and their bin picking capabilities. Guides through whole practical solution of given task and discuss crucial subtasks.
Literature review	Jan used available literature and relevant online sources for getting reliable information about current state of art and bin picking possibilities.
Using the literatur	Most of the literature are used for description of principles of camera technologies or as a source for used image.
Comments	In the beginning the communication took place in english, during the time also combined with german.

Final mark:

1,6

Place, Datum: Hassmersheim, 6/5/15



Signature supervisor