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Project Data

Project Name	amos-ss2021-neural-network-enablement
Production system (if any)	
Test system (if any)	
GitHub repository	https://github.com/amosproj/amos-ss2021-neural-network-enablement
GitHub kanban board (project)	https://github.com/amosproj/amos-ss2021-neural-network-enablement/projects/2
Team T-shirt (white)	https://www.shirtinator.de/loadBasket/G2MEDOgLk4p
Team T-shirt (black)	https://www.shirtinator.de/loadBasket/aVPWvh3Dwht
Additional materials	

AMOS Proj6 - Planning Documents Project Team

Last Name	First Name	GitHub User Name	Email Address	Device
Ke	Yilin	yilinke	yilinke1995@gmail.com	
Winklmann	Philipp	PhilAce3000	philipp.winklmann@jct.de	
Chen	Xiangxiang	cynthiachen28	roxettekc@hotmail.com	
An	Qi	Emma-An94	787434822@qq.com	
Then	Maximilian	TheSayonara	max.then@yahoo.de	
Meier	Wolfgang	womeier	wolfgang.meier@fau.de	
kolan	Rajkumar Reddy	rajkumarkolan	rajkumar.kolan@fau.de	
Susmitha	Rachamreddy	ce52supi	susmi4356@gmail.com	

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Team Contract

Goals	Achieve our defined project mission
Meeting norms	Be there, if you cant come update your stuff. Be on time. Come prepaired.
Working norms	Think about group work. Be prepared for presentation/report on wednesday. Finish work on Tuesday.
Coordination norms	Be organized. Aks for help immediately if you are stuck (other teams, Scrum Master).
	Put ToDo-list on Teams.
Communication norms	Answer messages within 24 hours.
	PO: Communicate regularly and clearly.
Consideration norms	We discuss disagreement openly
	We vote for a final resolution
Cont. improvement norms	
Rewards	Congratulate person fixing a bug
	Buying celebration cards and get ice cream
Sanctions	Being 5 minutes late = 1€ in piggy bank
Name	Netella
Signed by	Everybody:)

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Role Assignments

#	Meeting Day	Comment	Coach	Product Owner	Software Developer	Scrum Master	Release Manager
1	2021-04-14		Yes	Maximilian	Everyone else	N/A	N/A
2	2021-04-21		Yes	Maximilian	Everyone else	Philipp	N/A
3	2021-04-28		Yes	Maximilian	Everyone else	Philipp	Wolfgang Meier
4	2021-05-05			Maximilian	Everyone else	Philipp	Xiangxiang Chen
5	2021-05-12		Yes	Maximilian	Everyone else	Philipp	Yilin Ke
6	2021-05-19			Maximilian	Everyone else	Philipp	Susmitha Rachamreddy
7	2021-05-26	Mid-term due	Yes	Maximilian	Everyone else	Philipp	Wolfgang Meier
8	2021-06-02			Philipp	Everyone else	Maximilian	Qi An
9	2021-06-09			Philipp	Everyone else	Maximilian	Rajkumar Kolan
10	2021-06-16		Yes	Philipp	Everyone else	Maximilian	Susmitha Rachamreddy
11	2021-06-23			Philipp	Everyone else	Maximilian	tba
12	2021-06-30			Philipp	Everyone else	Philipp	tba
13	2021-07-07		Yes	Philipp	Everyone else	Maximilian	tba
14	2021-07-14	Demo day!		Philipp	Everyone else	Maximilian	tba
15	2021-07-21	Retrospective		Philipp	Everyone else	Maximilian	tba

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Product Goal

Product Vision	Project Mission
The client's vision is to operate a web-based service that allows black and white photos and videos to be uploaded and viewed and downloaded in color. It also aims to improve the quality of the photo/video. The service is to be enabled by pre-trained neural networks and run on Huawei's own hardware.	The goal of the project is to implement a first version of the web server on the Altas 200 DK hardware. This is to receive photos and videos and feed them to the neural network provided for coloring. Afterwards the result shall be displayed. If time permits, a super-resolution network is to be added to the pipeline.

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Product Glossary

Term	Definition
tba	to be announced
NN	Neural Net
Backend	Server-part of the webservice: handles the images sent from the frontend, applies the colorization process (app.py)
Frontend	Client-part of the webservice: the user interface (everything in Webservice/static/ and Webservice/templates/)
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Host (as defined in the Atlas 200DK documentation)	Host side: The part on the board, where opency or numpy operations happen
Device (as defined in the Atlas 200DK documentation)	Device side: The part on the board that is responsible for the NN computing, i.e. the acl-context)

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Mid-Project Release Tracking

	Theme		Feature Name	Est. Size (Feature)	Est. Size (Sprint)	Real Size (Feature)		
2 I	Basic fro				7	'	9	92
		First steps for webs						
			#3 Create Webservice	3		3		
			#6 Webservice: Upload Picture	2		3		
			#8 Webservice: Present uploaded pictures	2	!	3		
3	Advance	ed frontend and first	work for hackend		6		6	86
3 /	Auvance	Improvement webs					0	00
		improvement webs	#5 Webservice: Setup and run scripts	3		3		
			#7 Webservice: Delete picture	3		3		
			#7 Webservice. Delete picture	3	1	3		
4 1	First ste	ps backend			9		11	75
		Basic backend fund	etions					
			#14 Pipeline: Load and store pictures/videos	3	1	3		
			#22 Pipeline: Connect Webservice to pipeline	3		5		
			#15 Pipeline: Splitt Video into pictures	3		3		
5 /	Advance	ements in frontend	<u>'</u>					
		Frontend			7	,	0	75
			#9 Webservice: Colorization	5				
			#10 Webservice: Present the results	2				
6 1	Finishin	g the NN pipeline an		_				
		Backend	a sinasio tootiing		29		30	45
		Buokona	#23 Create helper functions from utils.cpp in Python	3		2		10
			#29 Testing: Continuous Integration	3		5		
			#28 Testing: Functional Test	3		3		
			#30 Merge of pipeline tasks	5		5		
			#00 Merge of pipeline tasks	J		3		
							-	
				Burn-Down-	Chart			
				Bulli Bowli	Oriant			
				100 —				
					_			
				75 —				
				50				
				50 ——				
				25 —				
				25				

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Mid-Project Release Tracking

#	Theme	Goal	Feature Name	Est. Size (Feature)	Est. Size (Sprint)	Real Size (Feature)	Real Size (Sprint)	Burn- Down

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Final Project Release Planning

# The	eme Goal	Feature Name	Est. Size (Feature)	Est. Size (Sprint)	Real Size (Feature)	Real Size (Sprint)	Burn- Down
2 Bas	sic frontend			7		9	141
	First s	teps for webservice					
		#3 Create Webservice	3		3		
		#6 Webservice: Upload Picture	2		3		
		#8 Webservice: Present uploaded pictures	2		3		
3 Adv	vanced front	end and first work for backend		6		6	135
	Improv	vement webservice					
		#5 Webservice: Setup and run scripts	3		3		
		#7 Webservice: Delete picture	3		3		
4 Firs	st steps bacl	send		9		11	124
		backend functions					
	200.0	#14 Pipeline: Load and store pictures/videos	3		3		
		#22 Pipeline: Connect Webservice to pipeline	3		5		
		#15 Pipeline: Splitt Video into pictures	3		3		
5 Adv	vancements						
	Fronte			7		0	124
		#9 Webservice: Colorization	5				
		#10 Webservice: Present the results	2				
6 Ena	able testing						
	Backe	nd		29		30	94
		#23 Create helper functions from utils.cpp in Python	3		2		
		#29 Testing: Continuous Integration	3		5		
		#28 Testing: Functional Test	3		3		
		#30 Merge of pipeline tasks	5		5		
7 Fini	ish integration	on and test pipeline					
	Backe	nd		27		29	65
		Finish Preprocessing, Postprocessing and the Colorization	13		13		
		Merge Pipeline Tasks	5		5		
8 Add	d video featu	ıre					
	Backe			13		11	54
		Correction of the colouring output	5				
		Refactoring: Update flask library	2		2		
		Documentation	(2+2+5) = 9		9		
9 Nev	w: high reso	lution feature					
	Backe			16			
		Bug fix: Colouring output	5				
		Frontend Bug: empty gallery & present results	3+3				
		Merge Video	5				
10 Hig	gh resolution	feature					

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Final Project Release Planning

#	Theme	Goal	Feature Name		Est. Size (Feature)	Est. Size (Sprint)	Real Size (Feature)	Real Size (Sprint)	Burn- Down
		Backe							
			High Resolution: Helper functions						
			High Resolution: Merge Pipeline Tasks						
11	Full We		e Experience						
		Fronte							
			Web Service: Display Videos correctly & with Sound						
40	D		Web Service: Display High Resolution accordingly						
12	Prepare	e for der	по дау						
13	Final pr	roject rel	ease & finish documentation						
			Finish Documentation (User Documentation, Technical Documentation, Build/deploy d	locumentation)					
14	Summa	ary & Re	trospective						
			E	Burn-Down-C	hart				
			1	150 —					
			1	100 —					
				100					
				50 —					
				0					

AMOS Proj6 - Planning Documents Impediments Backlog

Sprint	Status	Source	Impediment	Resolution
1	Resolved	github	missing push rights	contact Prof. Riehle
2	Resolved	hardware	distribution of hardware needs a loancontract	Distribution via pick up at Prof. Riehle's chair or shipping via mail
3	Resolved	project team	answers are not there or too late	answer to questions within 24 hours
4	Resolved	project team	there is no communication after a method's interface which is important for the whole team is changed	
5	Resolved	Atlas 200 DK	SD card is not detected	
6	Resolved	acl toolkit	cannot be imported	
7	Resolved	source code	every SD needs to test his/her code before push	
8	Resolved	9th team member	He is not in any of the meetings and not doing any work	
9	Resolved	Other team members	Overwriting other code	
10	Resolved	Other team members	Refactor a change in a variable everywhere in the code	
11	Resolved	Github	Create own branch for every SD	
12	Resolved	Integration Test	Runs on Wolfgangs local device and he cannot switch it of	
13	Created	Team member	More programming in teams for productivity	

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Definition of Done

#	Feature Definition of Done	Sprint Release Definition of Done	Project Release Definition of Done
1	All Acceptance criteria met	Testcoverage > 50%	Testcoverage > 80%
2	Documentation completed	Feature DoD is met	Unit test passed
3	Peer code review passed	No previous code got broken	Integration testing passed
4		Unit tests	
5		Code formatting check: green	

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Documentation

Type	Link / reference
Build / Deploy Documentation	https://github.com/amosproj/amos-ss2021-neural-network-enablement/wiki/Build-&-Deploy
User Documentation	https://github.com/amosproj/amos-ss2021-neural-network-enablement/wiki/User-Documentation

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Bill of Materials

1	Context	Name	Version	License	Comment
1	Webservice backend	flask	1.1.2	BSD-3-clause (BSD-new)	
2	Webservice frontend	tailwindcss	2.1.2	MIT	
3	Webservice frontend	dropzonejs	5.9.2	MIT	
4	Webservice frontend	jquery	3.4.0	MIT	
5	Webservice frontend	toastify-js	1.11.0	MIT	
6	Webservice frontend	fontawesome-free icon	5.0.13	CC BY 4.0	
7	Webservice frontend	heroicons icon	1.0.0	MIT	
8	Testing	pytest	6.2.4	MIT	
9	Testing	pytest-cov	2.12.0	MIT	
10	Testing	flake8	3.9.2	MIT	
	OS	Ubuntu	18.04	GPL	GPL ok, we don't redistribute it
	Developer board	Atlas 200 DK	1.73.0.0		
13	Pipeline backend	Python	3.7.5	GPL	GPL ok, we don't redistribute it
14	Toolkit package	Ascend Toolkit	20.0.RC1- arm64- linux_gcc7. 3.0	GPL	GPL ok, we don't redistribute it
15	Toolkit package	Ascend Toolkit	20.0.RC1- x86_64- linux_gcc7. 3.0	GPL	GPL ok, we don't redistribute it
	Toolchain platform	Mind Studio	2.3.3		
17	Suggested colorization code	Sample colorization	2020-11	Apache 2.0	
18	file contains acl related constant values	constants.py	2020-06-06	<u>huawei.com</u>	renamed as <a href="mailto:acl_constants.py">acl_constants.py</a> and added comments about the source in the file. No other content changes.

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Planning Poker

Last Name	First Name	Value			
Ke	Yilin		TOIV!	TUIVI	
Winklmann	Philipp		0!	0!	
Chen	Xiangxiang		O:	U:	
An	Qi				
Then	Maximilian		0	No effort	
Meier	Wolfgang		1	Minimal effort	
kolan	Rajkumar Reddy		2	Small effort	
Susmitha	Rachamreddy		3	Medium effort	
			5	Large effort	
			8	Very large effort	
			13	Too large effort	