

# Software Engineering Practice Project Proposal

## **Team Name:**

Keeping Up Appearances

## **Team Members:**

Robert McNicol - w18007336

Dawid Michniuk - w18016997

Dominykas Patinskas - w18016919

Vilius Chockevicius - w18007679

## **Programme of Study:**

Computer Science with Artificial Intelligence

## **Mission Responsibilities:**

- **Dawid Michniuk** will be taking on responsibility for **Baseline Implementation** and **Application Programming Interface**.
- **Vilius Chockevicius** will be taking on responsibility for **Project Ideation** and **Solution Design**.
- **Dominikas Patinskas** will be taking on responsibility for **Solution Testing** and **Graphical User Interface**.
- **Robert McNicol** will be taking responsibility for **Project Management** and **Mathematical Review**.

Since we are on the **Artificial Intelligence** stream of this module, the group task we will all be responsible for is **Iterative Development**.

## **Project Idea:**

We want to try restoring poorly aged images, specifically by adding colour to, what were originally, black and white photos. We know that there is a need for this technology since there are entire communities revolving around photo restoration and colorization. After we achieve good results in this area, we could potentially try adapting the technology to colorize and restore archaic/old movies.

## Robert McNicol Skills Audit

### Part 1 Key Skills

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
<b>ORGANIZATION OF LEARNING</b>				
I have strategies to help me to plan and manage my time		x		2
I am able to effectively prioritise my tasks and activities		x		1
I am able to work to deadlines	x			1
I am aware of what makes my learning more effective (e.g. place to study, time to study etc)	x			2

<b>INFORMATION SEEKING SKILLS</b>				
I am able to find a specific book or journal in the library using the on-line catalogue	x			3
I am able to use a variety of different sources to find information (e.g. journals, books, electronic resources)	x			2
I am able to access and search electronic resources (on-line databases, electronic journals CD-ROMs)		x		2
I am able to use search gateways on the Internet to find information		x		2
I am able to evaluate the information I find	x			2
<b>READING AND NOTEMAKING</b>				
I can decide which parts of a book I need to read		x		2
I have a system for recording where I find information (e.g. book, author, date)		x		1
I can select and use different reading strategies (e.g. skim, scan, in-depth)		x		1
I can make effective notes when reading		x		1
I can make effective notes when listening (e.g. during lectures)	x			2
I have a system for recording and storing my notes		x		1

<b>WRITING SKILLS</b>				
I can analyse assignment (essay, report etc) questions to determine what is expected		x		2
I understand the difference between an essay and report		x		3
I can produce a written plan to answer an assignment question		x		1
I can punctuate, use grammar and spelling correctly	x			3
I am confident I can express my ideas clearly in written form	x			3
I am able to adapt my writing styles to suit the appropriate media/audience		x		2
I understand the need to reference my work to avoid plagiarism	x			3

<b>SPOKEN COMMUNICATION</b>				
I am able to express my views verbally	x			3
I am confident speaking in front of a group of people		x		3
I can prepare, plan and deliver a presentation		x		2
I can use visual aids to support a presentation	x			3
I am able to listen to and appreciate the views of others	x			3

<b>WORKING WITH NUMBERS</b>				
I am competent in making simple calculations	x			3
I can present numerical information accurately	x			3
I can competently use a variety of numerical techniques (e.g. percentages, fractions, decimals)	x			3
I can interpret and present information in graphs and illustrations	x			3

<b>WORKING WITH OTHERS</b>				
I am good at working with other people	x			3
I am able to lead or organize a group		x		2
I know how to plan and manage meetings		x		1
I am good at co-ordinating a group such as storing and sharing files and documents		x		2
I am good at supporting other people	x			2
I am able to get the best out of others		x		2
I can motivate others		x		2
I am able to manage conflict or disagreement		x		1
People look at me as a leader		x		1

<b>STRESS MANAGEMENT</b>				
I know what causes stress	x			3
I am aware of my personal symptoms of stress	x			3
I can use strategies to help me cope with my stress or other people's stress	x			2

<b>PERSONAL DEVELOPMENT PLANNING</b>				
I am able to identify my personal goals		x		2
I am a good judge of what my strengths and areas for development are		x		2
I am able to identify opportunities for learning outside my course, e.g. clubs, societies, employment		x		2
I am able to plan for my personal development		x		1

## Part 2 Technical Skills directly relevant to your course.

Decide on a list of skills you might need for this module as a group then complete the audit individually.

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
Programming in Python		x		1
Understanding of Machine Learning		X		1
Ability to pick correct dataset		X		1
Ability to scrap unneeded data from the dataset		X		1
Fixing Machine Learning Errors		X		1
Evaluating Model's performance		X		2
Testing		X		2
Creating additional data based on existing one		X		2
Formatting the code for readability	X			1
Converting existing data to a usable format		X		1
Finding applicable datasets		X		1
Understanding of Maths behind the program		X		2
Ability to present the Math equations we used		X		1
Knowledge of existing models in similar area		x		2
Ability to spot bad datasets / models		X		2

## Dominykas Patinskas Skills Audit

### Part 1 Key Skills

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
<b>ORGANIZATION OF LEARNING</b>				
I have strategies to help me to plan and manage my time	X			3
I am able to effectively prioritise my tasks and activities	X			2
I am able to work to deadlines	X			3
I am aware of what makes my learning more effective (e.g. place to study, time to study etc)	x			3

<b>INFORMATION SEEKING SKILLS</b>				
I am able to find a specific book or journal in the library using the on-line catalogue	X			2
I am able to use a variety of different sources to find information (e.g. journals, books, electronic resources)		X		1
I am able to access and search electronic resources (on-line databases, electronic journals CD-ROMs)		X		1
I am able to use search gateways on the Internet to find information	X			3
I am able to evaluate the information I find		x		1
<b>READING AND NOTEMAKING</b>				
I can decide which parts of a book I need to read	X			1
I have a system for recording where I find information (e.g. book, author, date)		X		2
I can select and use different reading strategies (e.g. skim, scan, in-depth)	X			2
I can make effective notes when reading	X			3
I can make effective notes when listening (e.g. during lectures)		X		2
I have a system for recording and storing my notes		x		1

<b>WRITING SKILLS</b>				
I can analyse assignment (essay, report etc) questions to determine what is expected		X		1
I understand the difference between an essay and report		x		1
I can produce a written plan to answer an assignment question	X			3
I can punctuate, use grammar and spelling correctly	X			3
I am confident I can express my ideas clearly in written form	x			3
I am able to adapt my writing styles to suit the appropriate media/audience		X		1
I understand the need to reference my work to avoid plagiarism	x			3

<b>SPOKEN COMMUNICATION</b>				
I am able to express my views verbally	X			3
I am confident speaking in front of a group of people	X			3
I can prepare, plan and deliver a presentation	X			3
I can use visual aids to support a presentation	x			3
I am able to listen to and appreciate the views of others	X			3

<b>WORKING WITH NUMBERS</b>				
I am competent in making simple calculations	X			3
I can present numerical information accurately	X			3
I can competently use a variety of numerical techniques (e.g. percentages, fractions, decimals)	x			3
I can interpret and present information in graphs and illustrations	x			3

<b>WORKING WITH OTHERS</b>				
I am good at working with other people	X			3
I am able to lead or organize a group	X			3
I know how to plan and manage meetings	X			3
I am good at co-ordinating a group such as storing and sharing files and documents	X			3
I am good at supporting other people	x			2
I am able to get the best out of others	x			3
I can motivate others	X			3
I am able to manage conflict or disagreement	X			3
People look at me as a leader		X		1

<b>STRESS MANAGEMENT</b>				
I know what causes stress	X			3
I am aware of my personal symptoms of stress	X			3
I can use strategies to help me cope with my stress or other people's stress		x		1

<b>PERSONAL DEVELOPMENT PLANNING</b>				
I am able to identify my personal goals	X			3
I am a good judge of what my strengths and areas for development are		x		2
I am able to identify opportunities for learning outside my course, e.g. clubs, societies, employment		X		1
I am able to plan for my personal development		x		1

**Part 2 Technical Skills directly relevant to your course.**

Decide on a list of skills you might need for this module as a group then complete the audit individually.

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
Programming in Python	X			1
Understanding of Machine Learning		X		1
Ability to pick correct dataset		X		1
Ability to scrap unneeded data from the dataset		X		1
Fixing Machine Learning Errors		X		1
Evaluating Model's performance		X		2
Testing		X		1
Creating additional data based on existing one		X		2
Formatting the code for readability	X			1
Converting existing data to a usable format		X		1
Finding applicable datasets		X		1
Understanding of Maths behind the program		X		1
Ability to present the Maths equations in similar area		X		1
Knowledge of existing models in similar area	X			2
Ability to spot bad datasets / models		X		2

# Vilius Chockevicius Skills Audit

## Part 1 Key Skills

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
<b>ORGANIZATION OF LEARNING</b>	+			<b>3</b>
I have strategies to help me to plan and manage my time		+		2
I am able to effectively prioritise my tasks and activities	+			3
I am able to work to deadlines	+			3
I am aware of what makes my learning more effective (e.g. place to study, time to study etc)	+			3

<b>INFORMATION SEEKING SKILLS</b>				
I am able to find a specific book or journal in the library using the on-line catalogue		+		2
I am able to use a variety of different sources to find information (e.g. journals, books, electronic resources)		+		1
I am able to access and search electronic resources (on-line databases, electronic journals CD-ROMs)		+		1
I am able to use search gateways on the Internet to find information	+			3
I am able to evaluate the information I find		+		2
<b>READING AND NOTEMAKING</b>				
I can decide which parts of a book I need to read		+		1
I have a system for recording where I find information (e.g. book, author, date)		+		1
I can select and use different reading strategies (e.g. skim, scan, in-depth)	+			3
I can make effective notes when reading		+		2
I can make effective notes when listening (e.g. during lectures)		+		2
I have a system for recording and storing my notes		+		1

<b>WRITING SKILLS</b>				
I can analyse assignment (essay, report etc) questions to determine what is expected		+		1
I understand the difference between an essay and report		+		1
I can produce a written plan to answer an assignment question	+			2
I can punctuate, use grammar and spelling correctly	+			3
I am confident I can express my ideas clearly in written form	+			3
I am able to adapt my writing styles to suit the appropriate media/audience		+		2
I understand the need to reference my work to avoid plagiarism	+			3



<b>SPOKEN COMMUNICATION</b>				
I am able to express my views verbally	+			3
I am confident speaking in front of a group of people	+			3
I can prepare, plan and deliver a presentation	+			3
I can use visual aids to support a presentation	+			3
I am able to listen to and appreciate the views of others	+			3

<b>WORKING WITH NUMBERS</b>				
I am competent in making simple calculations	+			3
I can present numerical information accurately	+			3
I can competently use a variety of numerical techniques (e.g. percentages, fractions, decimals)	+			3
I can interpret and present information in graphs and illustrations	+			3

<b>WORKING WITH OTHERS</b>				
I am good at working with other people	+			3
I am able to lead or organize a group	+			3
I know how to plan and manage meetings	+			3
I am good at co-ordinating a group such as storing and sharing files and documents	+			3
I am good at supporting other people	+			3
I am able to get the best out of others	+			3
I can motivate others	+			3
I am able to manage conflict or disagreement	+			3
People look at me as a leader	+			3

<b>STRESS MANAGEMENT</b>				
I know what causes stress		+		2
I am aware of my personal symptoms of stress	+			3
I can use strategies to help me cope with my stress or other people's stress	+			1

<b>PERSONAL DEVELOPMENT PLANNING</b>				
I am able to identify my personal goals	+			3
I am a good judge of what my strengths and areas for development are		+		2
I am able to identify opportunities for learning outside my course, e.g. clubs, societies, employment		+		1
I am able to plan for my personal development		+		1

**Part 2 Technical Skills directly relevant to your course.**

Decide on a list of skills you might need for this module as a group then complete the audit individually.

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
Programming in Python		+		1
<b>Understanding of Machine Learning</b>		+		1
<b>Ability to pick correct dataset</b>		+		1
<b>Ability to scrap unneeded data from the dataset</b>		+		1
<b>Fixing Machine Learning Errors</b>		+		1
<b>Evaluating Model's performance</b>		+		1
<b>Testing</b>		+		1
<b>Creating additional data based on existing one</b>		+		1
<b>Formatting the code for readability</b>	+			2
<b>Converting existing data to a usable format</b>		+		2
<b>Finding applicable datasets</b>		+		1
<b>Understanding of Maths behind the program</b>		+		2
<b>Ability to present the Math equations we used</b>		+		1
<b>Knowledge of existing models in similar area</b>		+		1
<b>Ability to spot bad datasets / models</b>	+			2

## Dawid Michniuk Skills Audit

### Part 1 Key Skills

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
<b>ORGANIZATION OF LEARNING</b>				
I have strategies to help me to plan and manage my time	X			1
I am able to effectively prioritise my tasks and activities	X			1
I am able to work to deadlines	X			2
I am aware of what makes my learning more effective (e.g. place to study, time to study etc)	X			2

<b>INFORMATION SEEKING SKILLS</b>				
I am able to find a specific book or journal in the library using the on-line catalogue	X			3
I am able to use a variety of different sources to find information (e.g. journals, books, electronic resources)	X			1
I am able to access and search electronic resources (on-line databases, electronic journals CD-ROMs)		X		2
I am able to use search gateways on the Internet to find information	X			2
I am able to evaluate the information I find		X		1
<b>READING AND NOTEMAKING</b>				
I can decide which parts of a book I need to read		X		2
I have a system for recording where I find information (e.g. book, author, date)	X			2
I can select and use different reading strategies (e.g. skim, scan, in-depth)	X			2
I can make effective notes when reading	X			2
I can make effective notes when listening (e.g. during lectures)	X			2
I have a system for recording and storing my notes	X			2

<b>WRITING SKILLS</b>				
I can analyse assignment (essay, report etc) questions to determine what is expected	X			1
I understand the difference between an essay and report			X	3
I can produce a written plan to answer an assignment question	X			2
I can punctuate, use grammar and spelling correctly		X		2
I am confident I can express my ideas clearly in written form	X			1
I am able to adapt my writing styles to suit the appropriate media/audience	X			2
I understand the need to reference my work to avoid plagiarism	X			1

<b>SPOKEN COMMUNICATION</b>				
I am able to express my views verbally	X			1
I am confident speaking in front of a group of people		X		2
I can prepare, plan and deliver a presentation	X			2
I can use visual aids to support a presentation	X			2
I am able to listen to and appreciate the views of others	X			1

<b>WORKING WITH NUMBERS</b>				
I am competent in making simple calculations	X			1
I can present numerical information accurately		X		1
I can competently use a variety of numerical techniques (e.g. percentages, fractions, decimals)	X			1
I can interpret and present information in graphs and illustrations	X			1

<b>WORKING WITH OTHERS</b>				
I am good at working with other people	X			1
I am able to lead or organize a group	X			1
I know how to plan and manage meetings	X			1
I am good at co-ordinating a group such as storing and sharing files and documents	X			1
I am good at supporting other people	X			2
I am able to get the best out of others		X		2
I can motivate others		X		2
I am able to manage conflict or disagreement	X			2
People look at me as a leader		X		3

<b>STRESS MANAGEMENT</b>				
I know what causes stress	X			3
I am aware of my personal symptoms of stress	X			3
I can use strategies to help me cope with my stress or other people's stress	X			2

<b>PERSONAL DEVELOPMENT PLANNING</b>				
I am able to identify my personal goals	X			2
I am a good judge of what my strengths and areas for development are	X			1
I am able to identify opportunities for learning outside my course, e.g. clubs, societies, employment	X			1
I am able to plan for my personal development	X			1

**Part 2 Technical Skills directly relevant to your course.**

Decide on a list of skills you might need for this module as a group then complete the audit individually.

SKILLS AREA	I CAN DO THIS WELL	OK, BUT I NEED MORE PRACTICE	I CAN'T DO THIS	PRIORITY DEVELOPMENT OF THIS SKILL 1 = very important, 2 = quite important, 3 = not important
Programming in Python	X			1
Understanding of Machine Learning		X		1
Ability to pick correct dataset		X		1
Ability to scrap unneeded data from the dataset		X		1
Fixing Machine Learning Errors		X		1
Evaluating Model's performance		X		2
Testing		X		2
Creating additional data based on existing one		X		2
Formatting the code for readability	X			1
Converting existing data to a usable format		X		1
Finding applicable datasets		X		1
Understanding of Maths behind the program		X		2
Ability to present the Math equations we used		X		1
Knowledge of existing models in similar area	X			2
Ability to spot bad datasets / models		X		2