



WSU PROJECTS

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Background



WORLD MAP

Background



Computer Graphics

Software Architecture

AI & Human Behaviour

Extended Realities

Visualisation

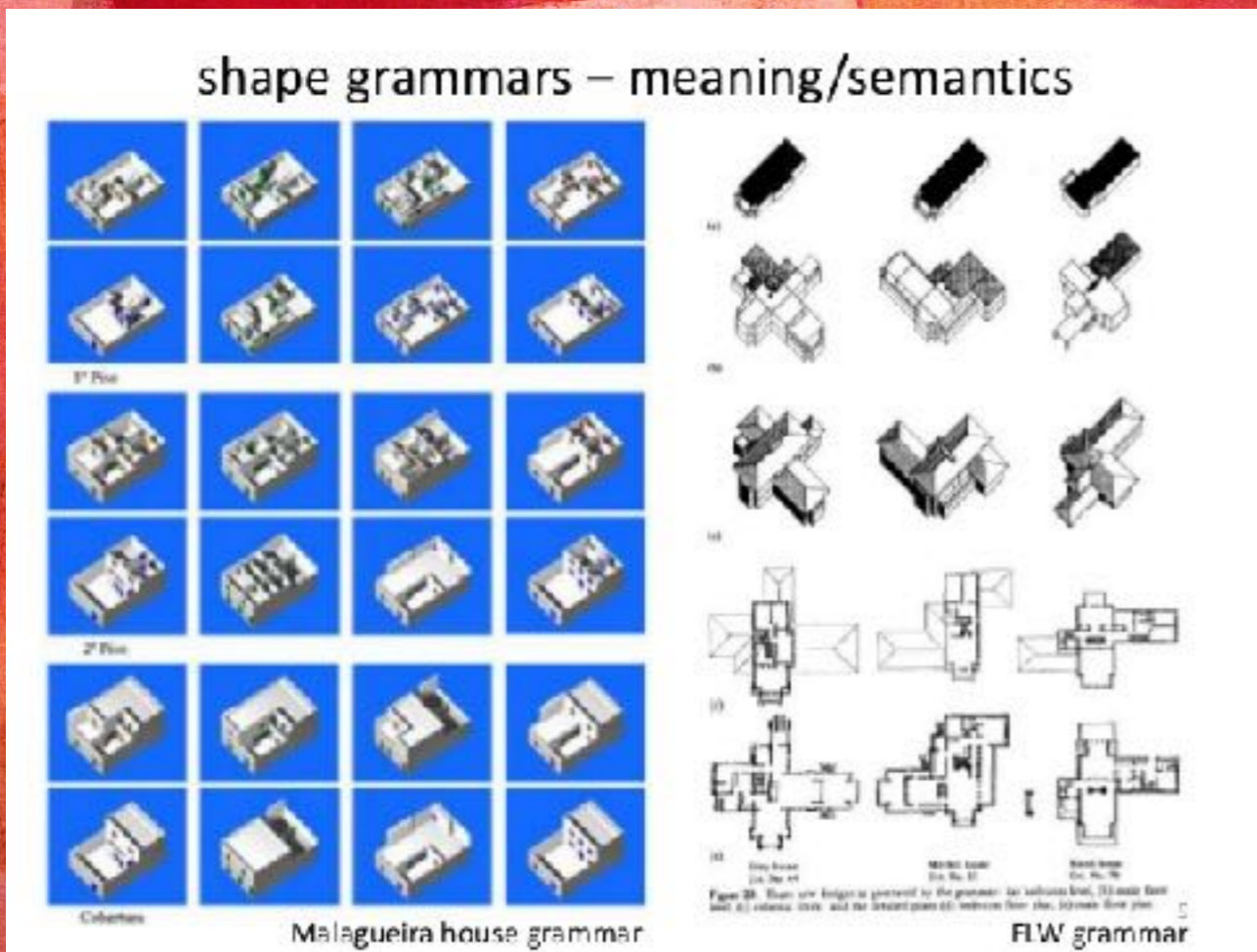
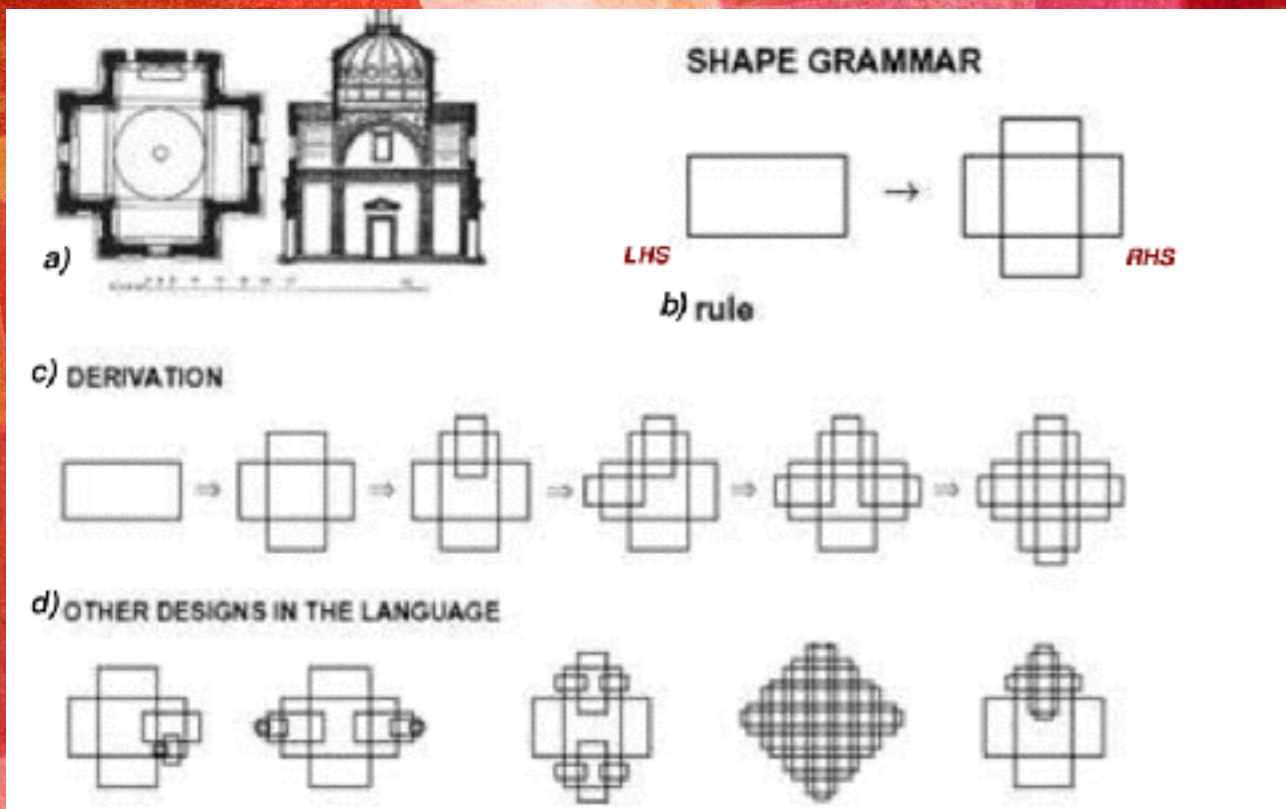
ML & Explainable AI

Cyber Security

WORLD MAP

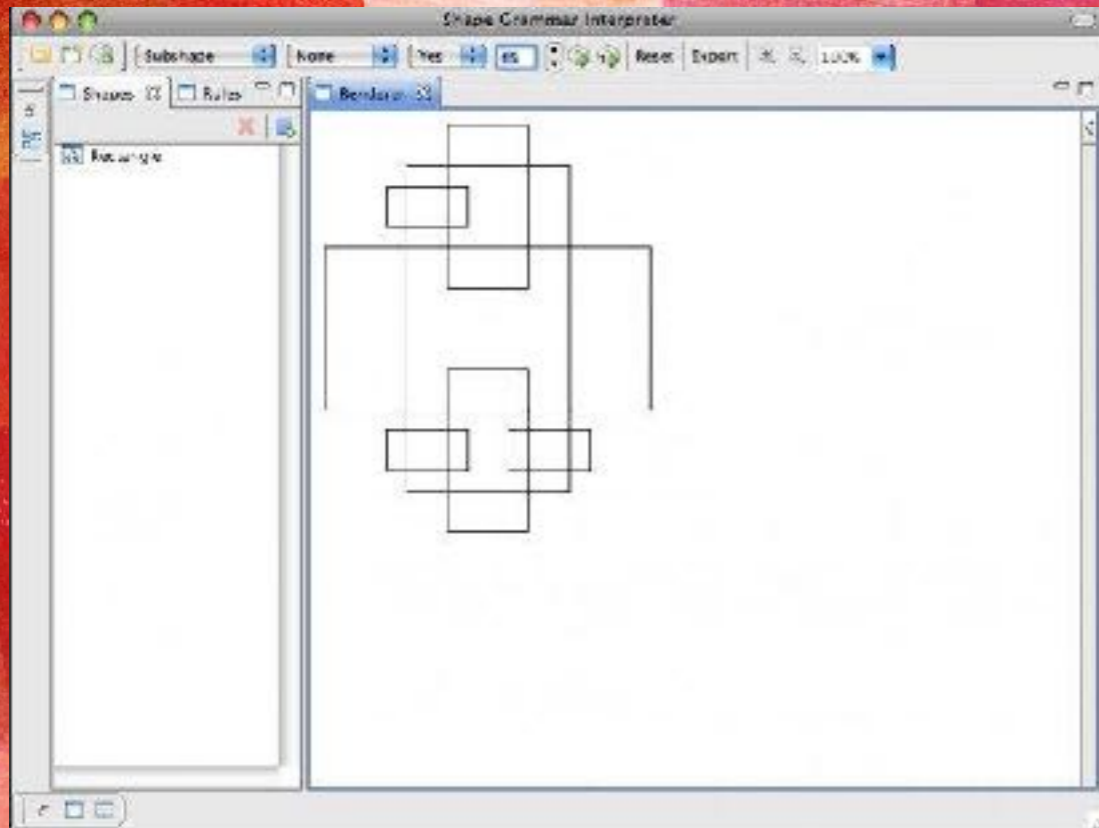
PROJECT #1 - PHD - COMPUTATIONAL CREATIVITY

- ▶ Procedural Design using Shape Grammars
- ▶ Automatic Generation of 2D and 3D content for Virtual simulations
- ▶ Downloaded: 50K+ times
 - ▶ At least 50 research papers
 - ▶ Forked and modified by several researchers



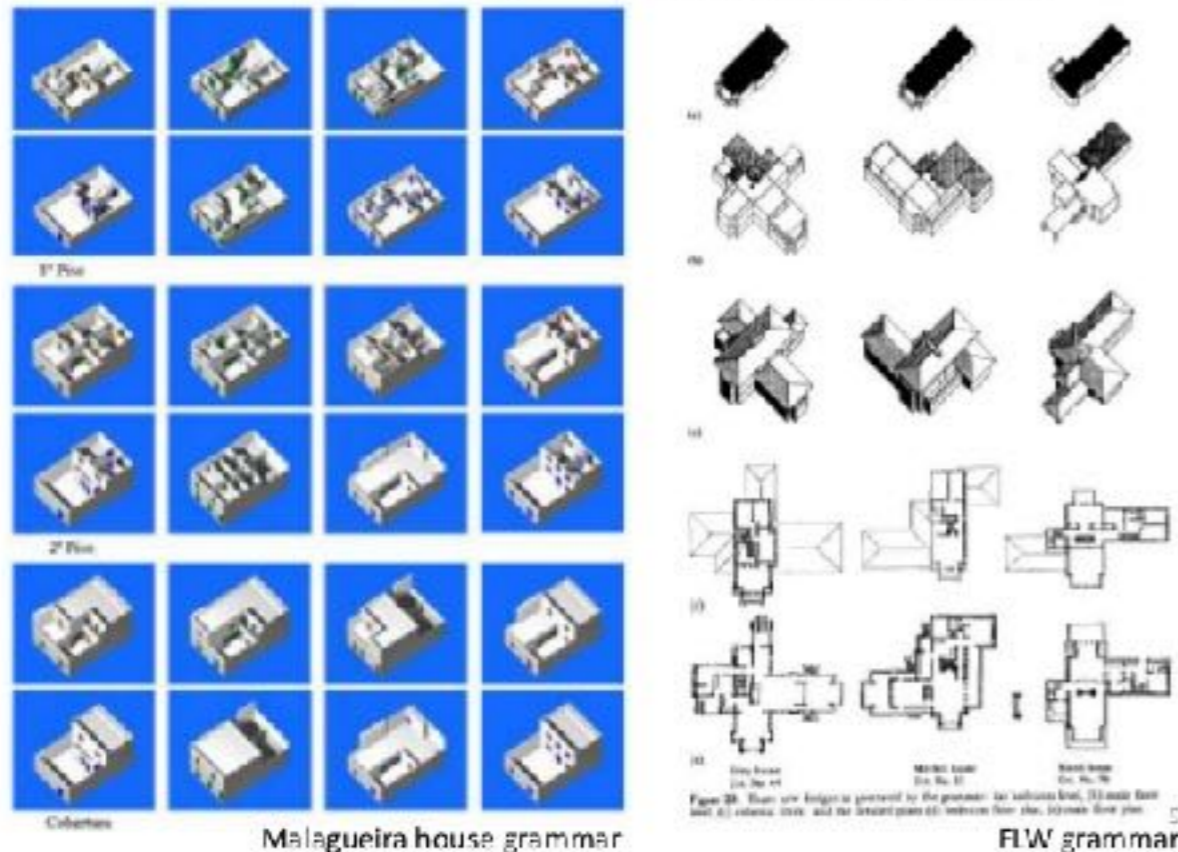
PROJECT #1 - PHD - COMPUTATIONAL CREATIVITY

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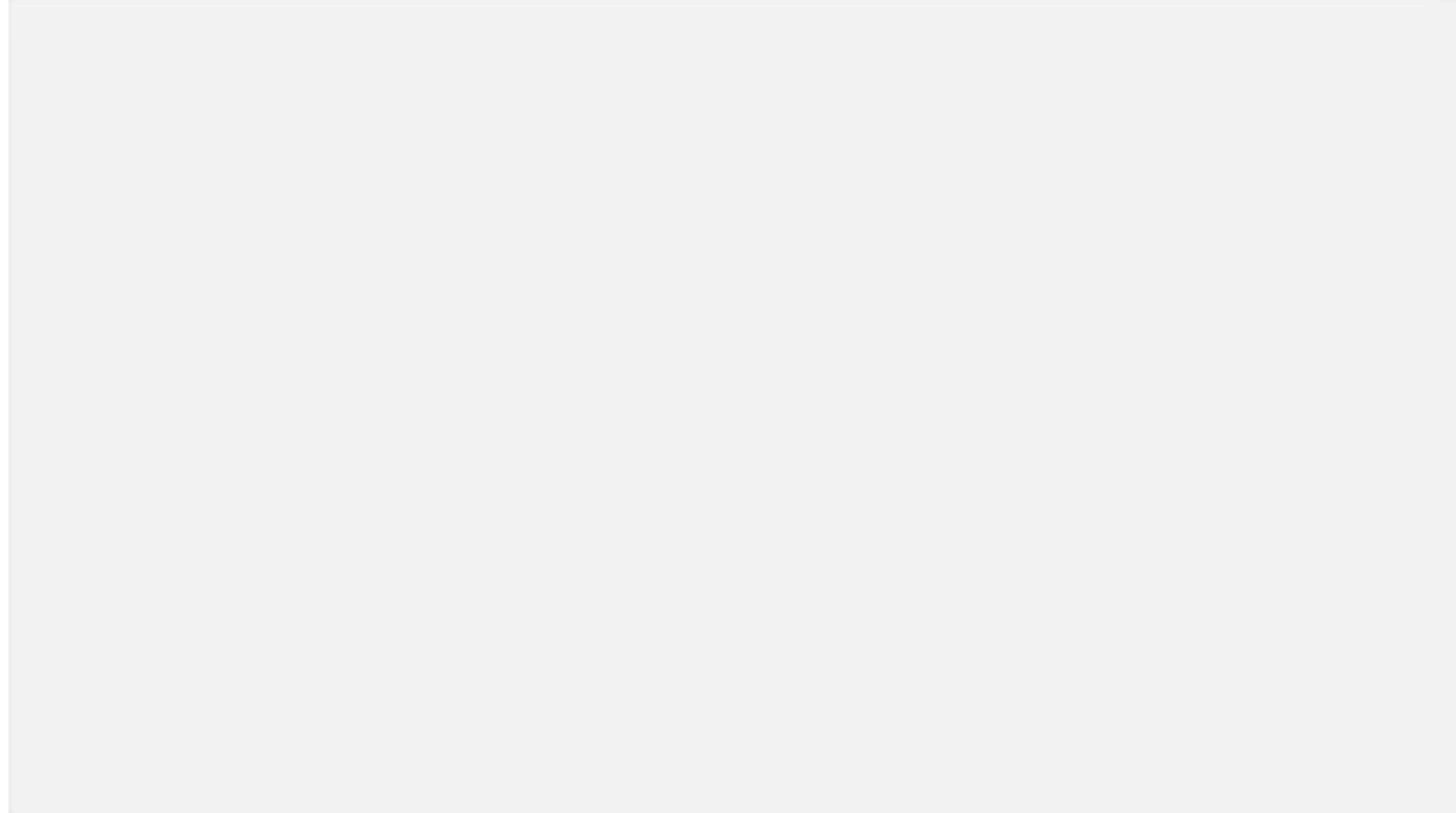
shape grammars – meaning/semantics



PROJECT #2 - POST DOC - BELIEVABILITY AND HISTORIC SIMULATIONS

.....

- Simulating Human Behaviour
- Changing pedagogical methods
 - Game-Based Learning
- Aboriginal
 - Preservation
 - Learning
- Uruk 3000 B.C
- Best Posters
- Best Demos
- Gala award



Uncle Steve



PROJECT #3 - CLARA WORLD

Learning

- Making learning programming fun!
- Gamification
- Game-Based Learning
- ACS - 2015 - Gold Medal
- ICT University Educator of the year

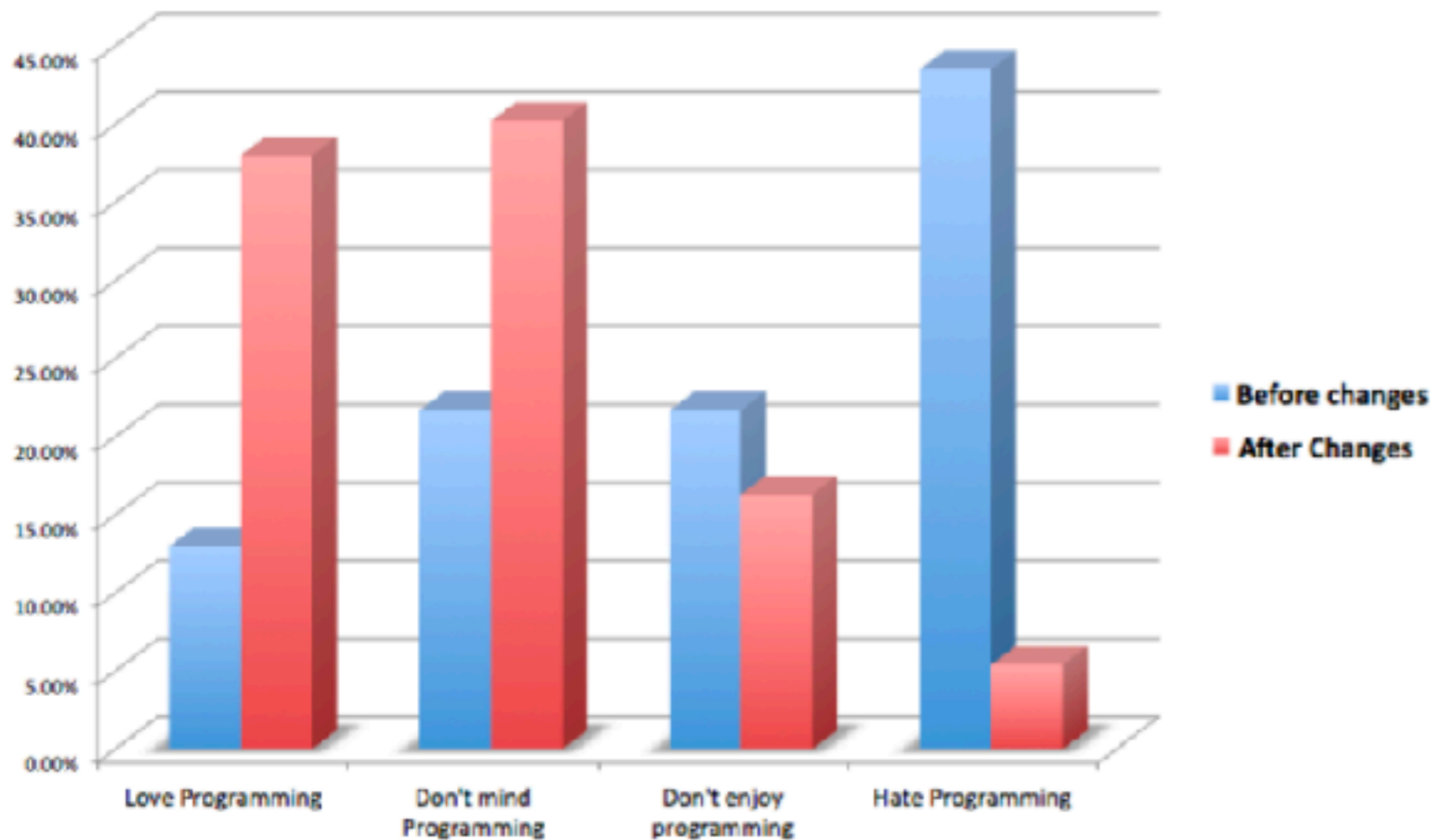


Figure 3: Programming attitude.



Learning programming has never been this much fun!

In your browser, on your tablet or mobile, Clara is always ready to challenge your problem solving and programming skills, preparing you to be an awesome programmer!

Enter Clara's World



PROJECT #3 - CLARA WORLD

- Making learning programming fun!
- Gamification
- Game-Based Learning
- ACS - 2015 - Gold Medal - ICT University Educator of the year

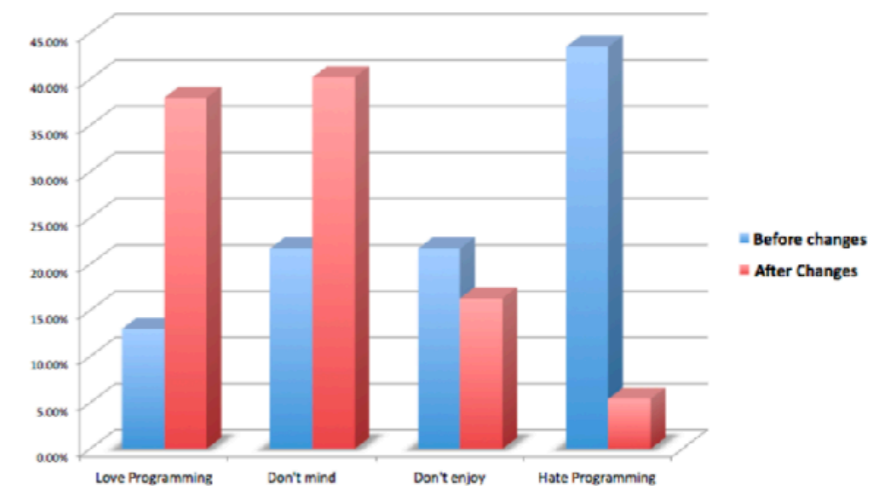
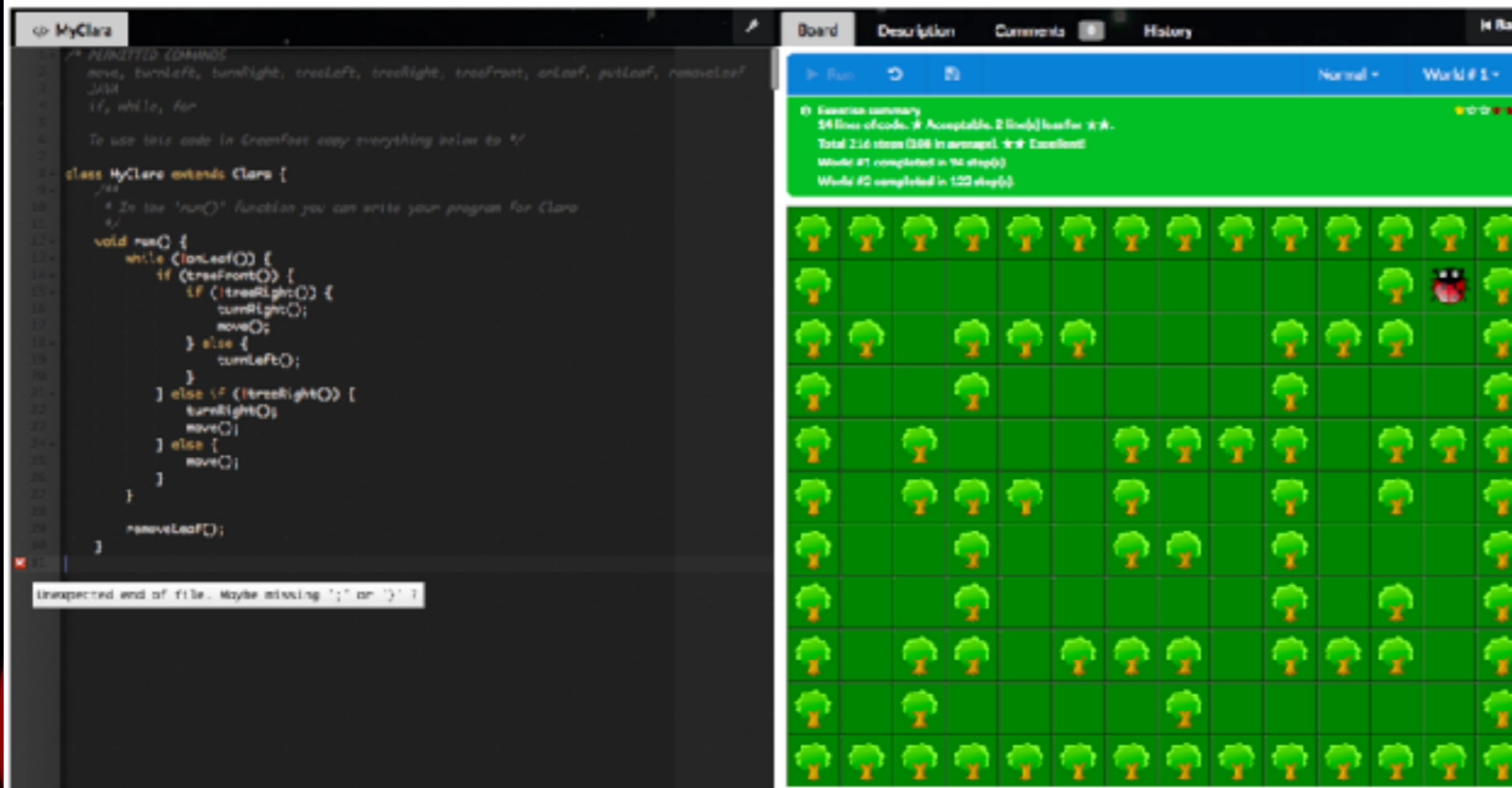


Figure 3: Programming attitude.

PROJECT #3 - CLARA WORLD



Making learning programming fun!

Gamification

Game-Based Learning

ACS - 2015 - Gold Medal
- ICT University Educator of the year

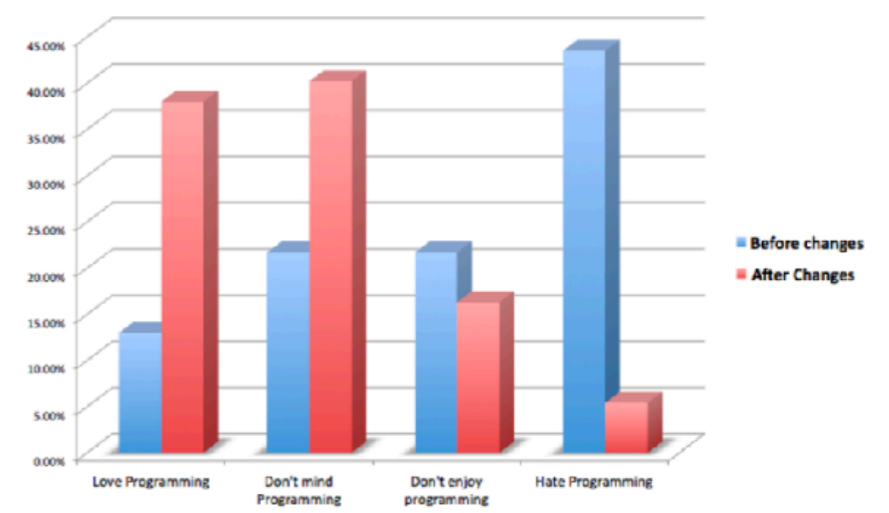



Figure 3: Programming attitude.

PROJECT #4 - FUTURE OF HEALTHCARE

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 **Test Results**

Confirmed Symptoms
Sore throat




Diagnosis


Common cold	Influenza
Tonsillitis	Bronchitis

Potential Symptoms

Fever
Itchy Rash



 **Mr. James Wesley**
Born: 23/02/1980
Pymont, 2009

Alerts

Allergies - Sufa Drugs
Blood Test Due
A1C Above Target

Date	Sp.	Doc.	Reason
02/2017	GP	Diaz, K.	Hypertension
11/2016	HV	Mirna, T.	Fever
22 more ...			

Diagnosis	(27)
Medication	(12)
Immunisations	(4)
Providers	(2)
Tests	(7)
Notes	(3)

SPHERE Grant - \$450.000

PROJECT #4 - FUTURE OF HEALTHCARE

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PART 1: Extended Reality

- Remote collaboration
- Increased productivity



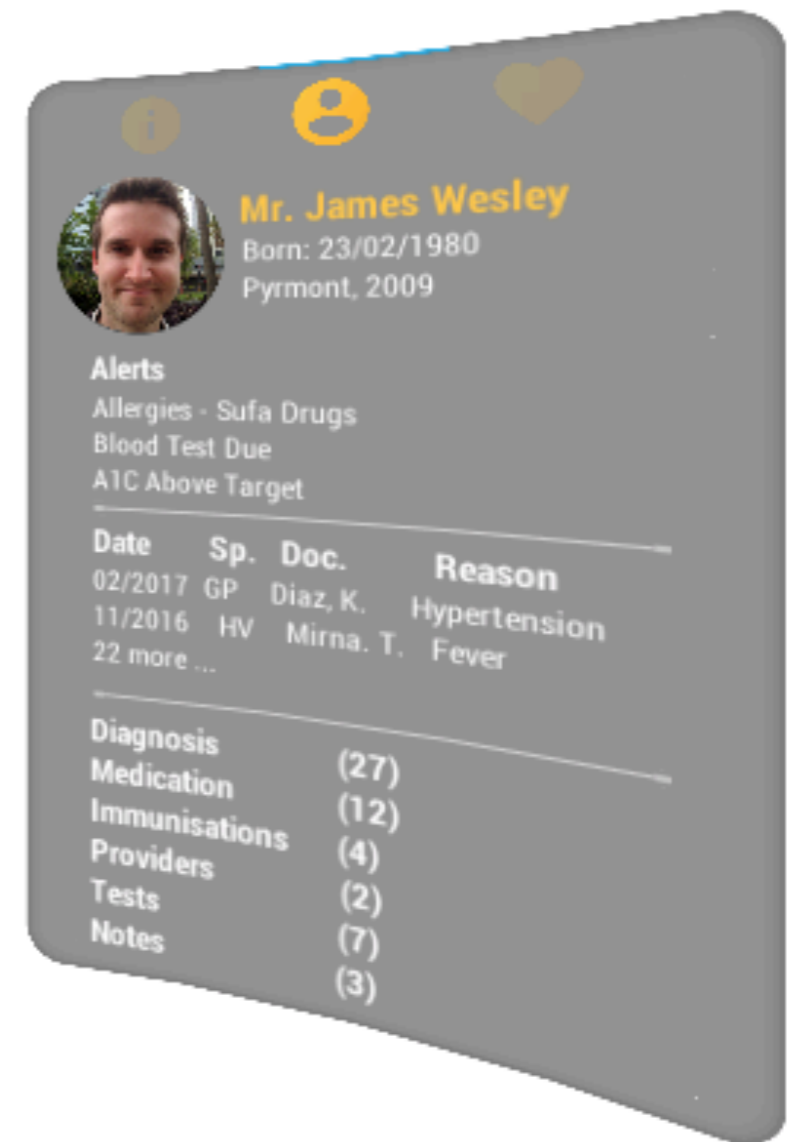
PART 2: Machine Learning

- Reducing cognitive overload
- Proactive decision making



PART 3: AI & Virtual Agents

- Natural language assistants
- Execution of complex tasks



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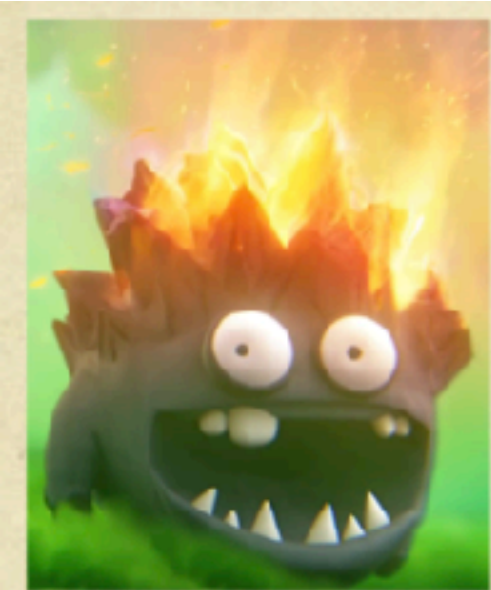
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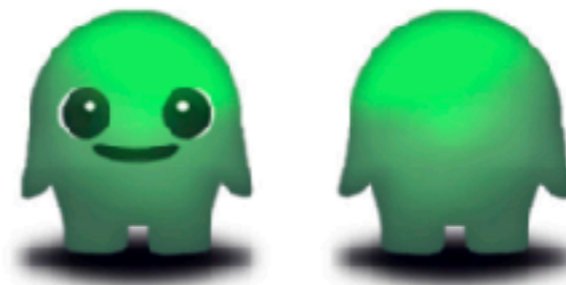
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Medication (12)
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Providers (2)
Tests (7)
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PROJECT #5 -

PALLIATIVE CARE, CHRONIC PAIN TREATMENT



The angry character is a dark colour, like black or dark red, and a solid/opaque shade.



The ball shares qualities like slime but feels more like rubber. Is malleable so it doesn't feel pain when punched or thrown around



The neutral is a lighter pale blue, pale green or pale yellow



SONY Grant - \$25.000

PROJECT #6 - PASSING TURING TEST

WITH TANKS !

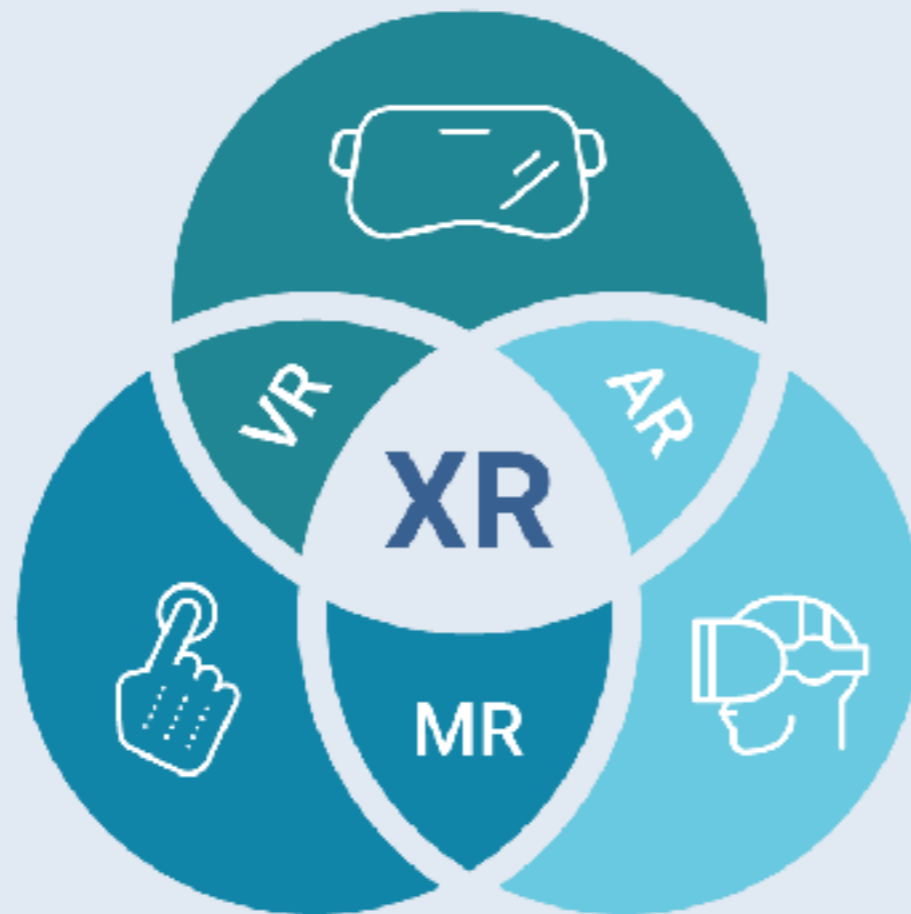


Technology Transfer - \$120.000

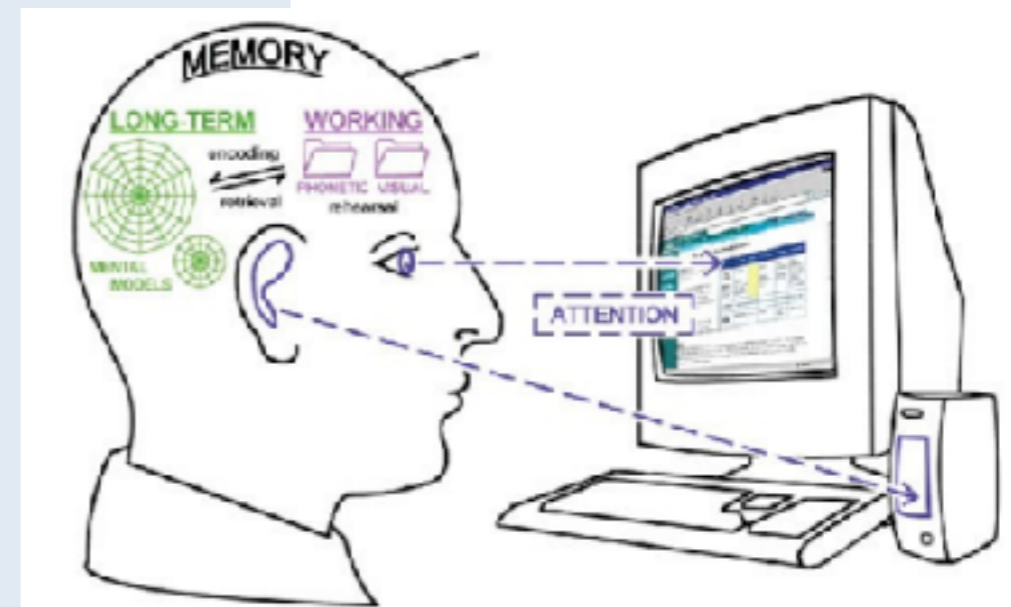
PROJECT #7 -

“PERCEPTUAL AND COGNITIVE OPTIMISATION OF VISUAL AUGMENTED REALITY DISPLAYS IN SIMULATED COMBAT ENVIRONMENTS”

THE GENESIS OF EXTENDED REALITY



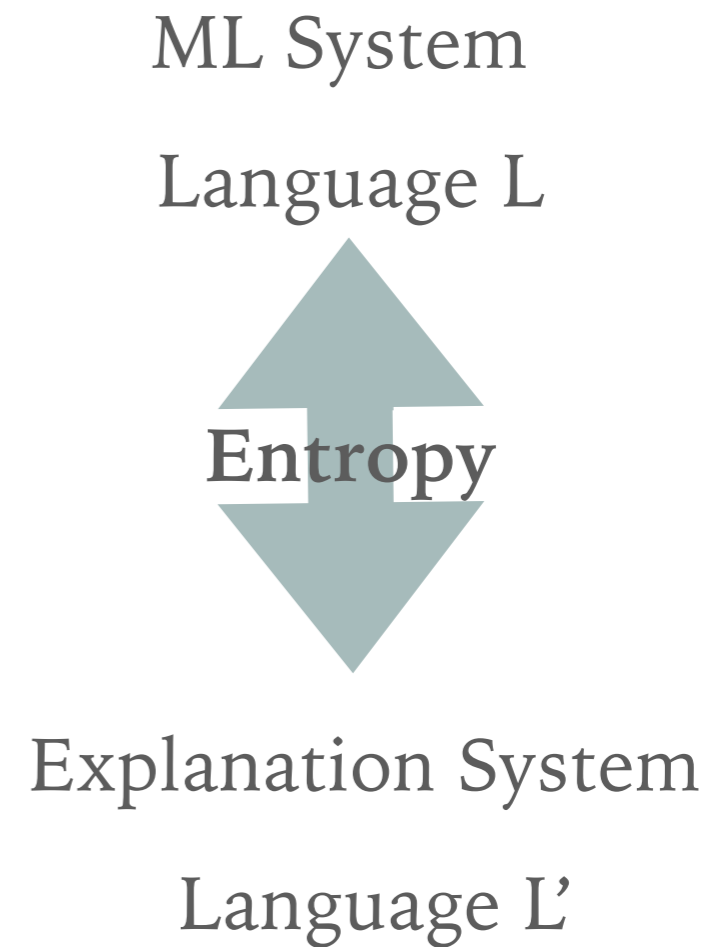
sam
solutions



DIN Grant - \$470.000

PROJECT #8 -

EXPLAINABLE AI FOR END USERS



PROJECT #9 -

PREDICTING USER BEHAVIOUR IN CYBER SENSITIVE SYSTEMS





T. HANKS