



会津大学



DIGITAL HUMANITIES
at the University of Aizu

DIGITAL HUMANITIES

Arts ▪ Languages ▪ Human-Centric Software

GT Research Orientation
Fall 2025



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*“Computer science draws upon perspectives from many disciplines and has a symbiotic relationship with the liberal arts disciplines, so it might be considered the ultimate of them” **

* H.M. Walker and C. Kelemen, “Computer science and the liberal arts: a philosophical examination,” ACM Transactions on Computing Education (TOCE), Mar 1, 2010, vol. 10, no. 1, pp.2:1–2:10.





Introduction

EXPERTISE, LINKS, AND INTERESTS

Academic Expertise: Courses and Research



Main page
Career
Academic Activity
Research
International Links
Events
Books
etc.,...



Evgeny Pyshkin

Arts · Software · Human-centric applications

School of Computer Science and Engineering
University of Aizu · Japan



ACM Member



Friend of the Royal Opera House

<https://u-aizu.ac.jp/~pyshe/>

Undergraduate Courses

- Introduction to Programming
- Programming in C
- Introduction to Data Management

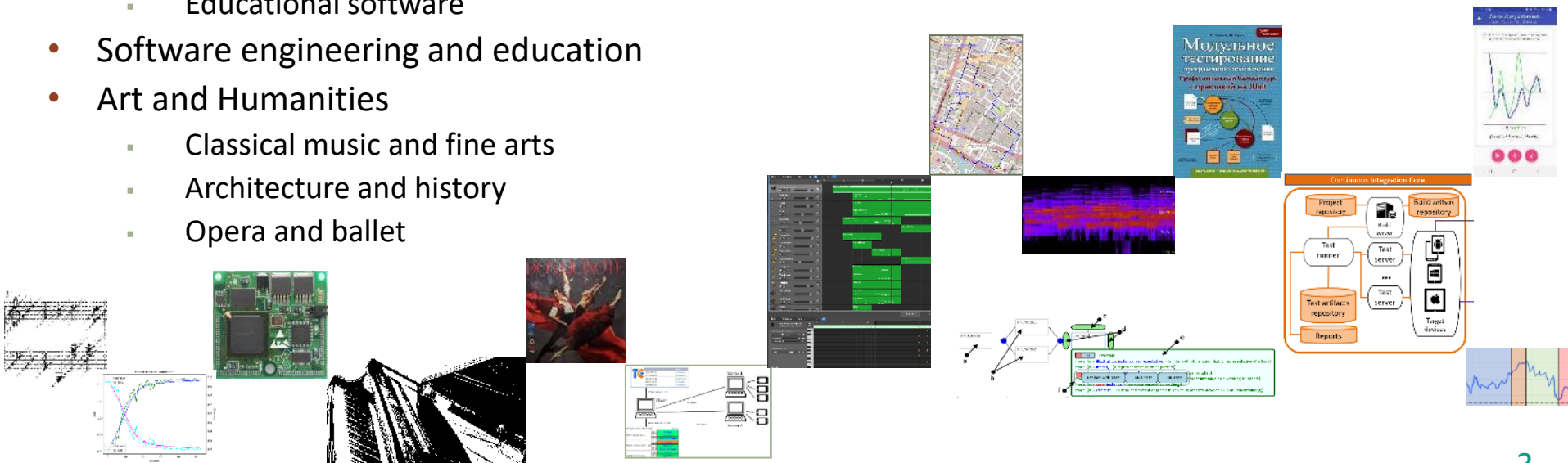
Graduate Courses

- Software and Cultures

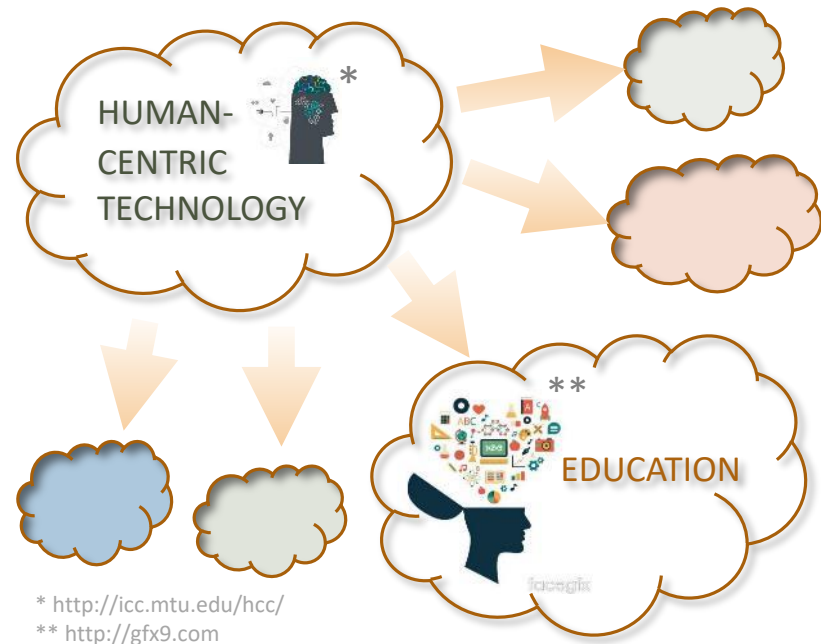
- Human-centric applications
 - iCALL environments
 - Speech processing applications
 - Information system for travelers
 - Educational software
- Software engineering and education
- Art and Humanities
 - Classical music and fine arts
 - Architecture and history
 - Opera and ballet

*“We are in era where we are reimaging nearly everything... powered by new devices, plus connectivity, plus new user interfaces, plus **beauty**...”*

Mary Meeker

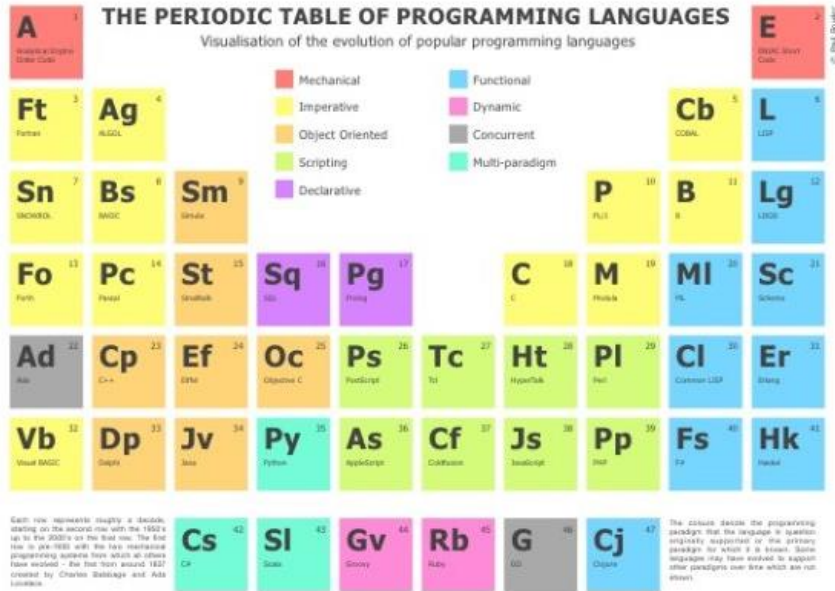


Areas and Project Themes



FROM AREAS OF INTEREST TO GT THEME PROPOSALS

Area: Exploring the World Through Languages



Kerry Pain, The most popular coding languages of 2015, June 5, 2015,
<https://www.linkedin.com/pulse/most-popular-coding-languages-2015-kerry-pain>

– Mikä on ensimmäinen kieli, joka kehittäjän tulee osata?
– Suomi.



– What language has the developer to know first of all?
– English.



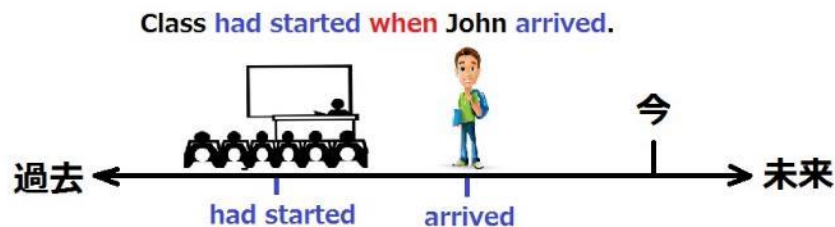
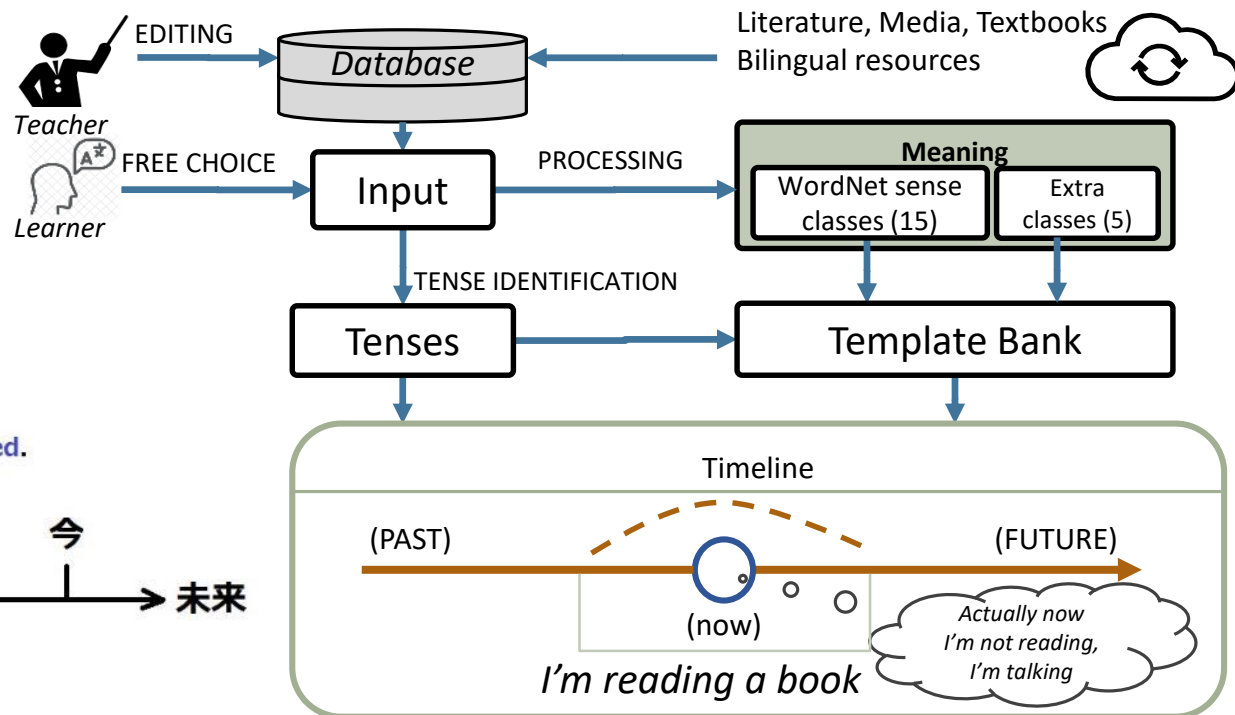
開発者はまず
はじめに何語を
知るのか
日本語



Project: Visual Interfaces for language learners

Complex tense constructions

- Timeline as a tool and interface to help language learners
- Modeling related language patterns



Future Perfect Simple Future Continuous Future Perfect Continuous Future Simple Past Continuous Past Perfect Continuous Past Perfect Simple Past Simple
Present Continuous Present Perfect Continuous Present Perfect Simple Present Simple

Result: Grammatical Tense and Meaning in Context

I **could** not **help** laughing at the ease with which he **explained** his process of deduction.

When I **hear** you **give** your reasons, I **remarked**, the thing always **appears** to me to be so ridiculously simple that I **could** easily **do** it myself, though at each successive instance of your **reasoning** I **am** **baffled** until you **explain** your process.

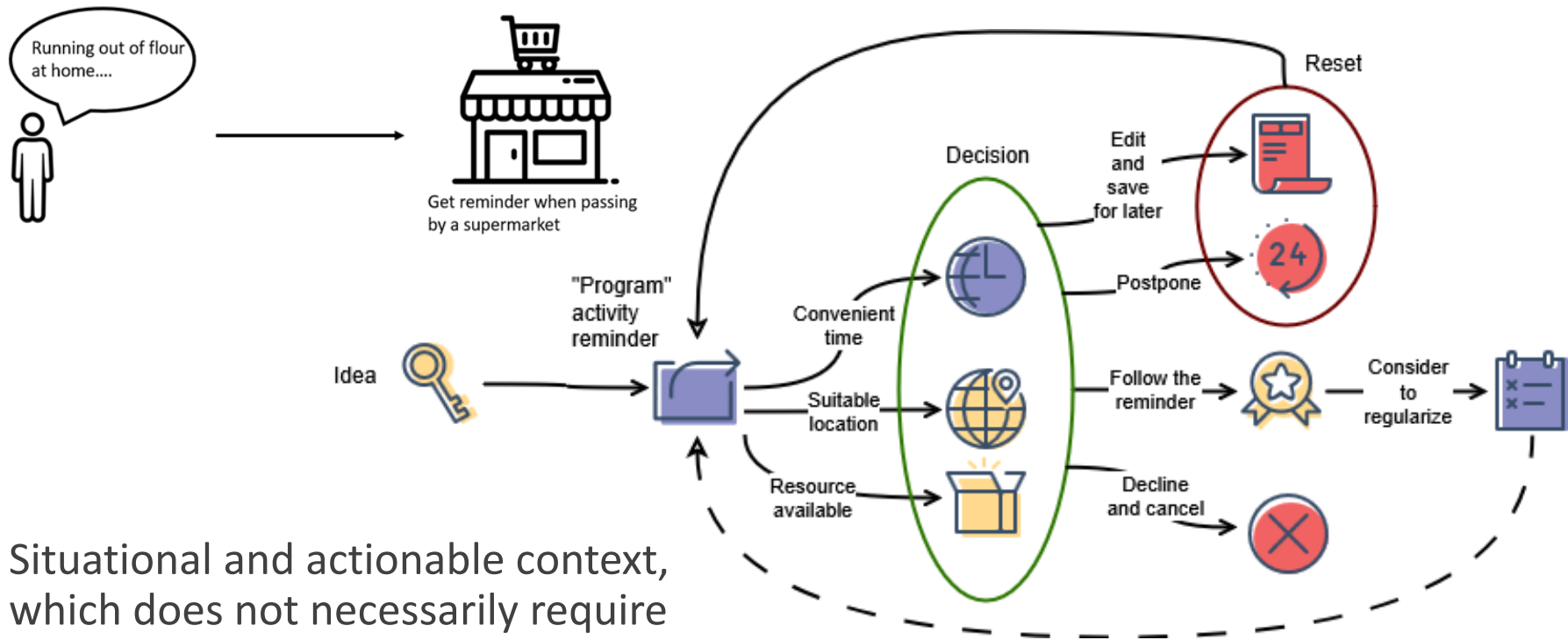
And yet I **believe** that my eyes **are** as good as yours.

Blake, J. (2020). Automatic identification of tense and grammatical meaning in context. *ICCE 2020 (vol. II)*, 739-742.

Blake, J., Pyshkin, E., & Pavlík, Š. (2022). Automatic detection and visualization of information structure in English. *6th NLPiR*, 200-204.

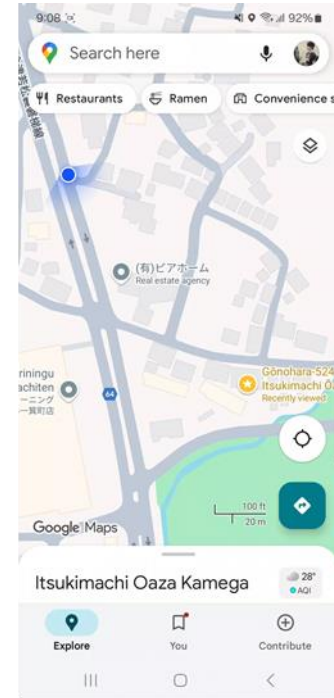
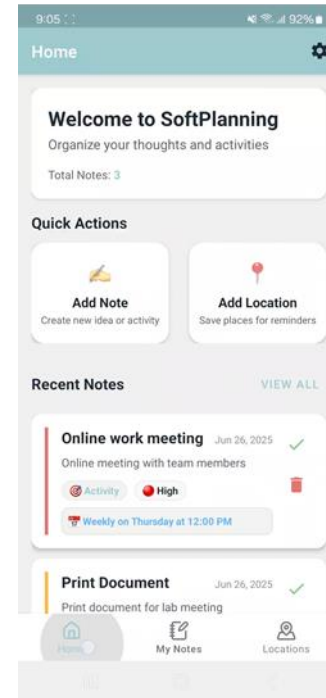
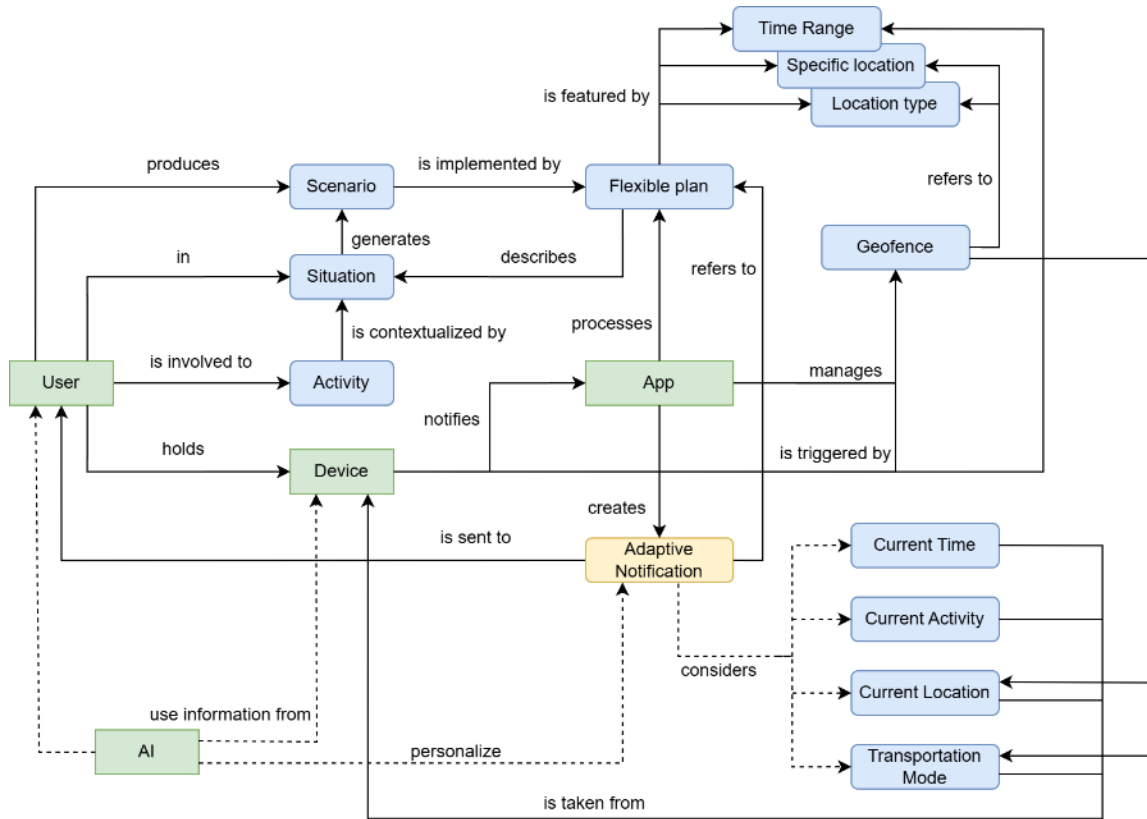
Area: "Soft Planning" – Activity Management

- Unfixed, infrequent situations assuming loosely planned activities
- Can be deferred until suitable conditions are met



- Situational and actionable context, which does not necessarily require strictly formalized scheduling

Project: Mobile platform for weakly planned activity adaptive and intelligent notifications



- Ontology modeling
- Extending software features

Gozaly, A. and Pyshkin, E. (2025) Lost by over-management: Adaptive notification model for handling weakly planned activities. Eng. Proc., 107(1), 4. Gozaly, A. and Pyshkin, E. (2025) Flexy Diary: Personalized services for handling weakly planned activities. In: H. Fujita et al. (eds) Frontiers in Artificial Intelligence and Applications, vol. 411 "New Trends in Intelligent Software Methodologies, Tools and Techniques", 160–173. IOS Press.

Area: Cultural Studies – Pottery

Learning Connections between Western and Japanese Traditions

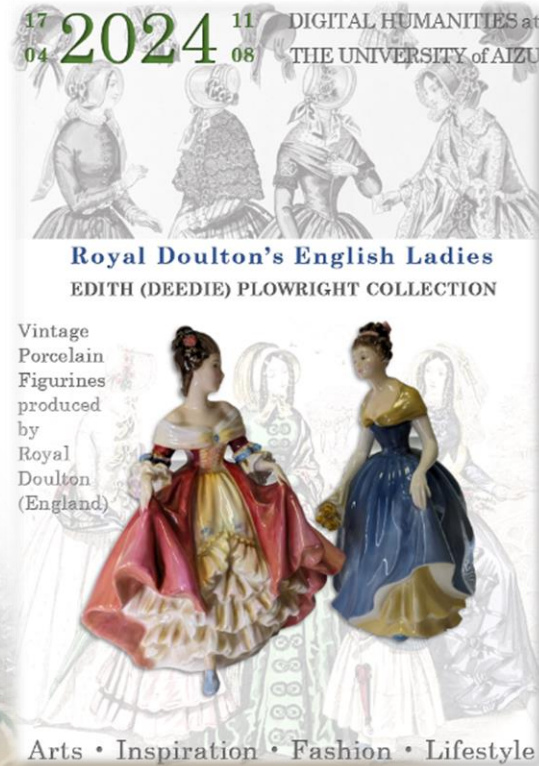
From organizing an exhibition to advanced cultural studies and computer technology applications

- Existing links between English and Japanese pottery making traditions
- Precious objects of decorative ceramics
- Reconstruction of broken objects using Kintsugi merged with the cutting-edge 3D modeling, virtualization, and digital fabrication technology

金継ぎ

Pyshkin, E., Sato, R., Nassani, A., and Blake, J. (2024) Transfigured reminiscence: Vintage porcelain figurine reborn through 3D virtualization and Kintsugi art. The Kyoto Conference on Arts, Media & Culture 2024: Official Conference Proceedings, 179--187, 2024.

Pyshkin, E., Sato, R., Nassani, A., and Blake, J. (2025) Virtualization for Kintsugi art: Damaged porcelain figurine recreation supported by 3D modeling computer technology. In: Filipa Martins de Abreu et al. (eds) ARTeFACTo 2024 Macao: 4th International Conference on Digital Creation in Arts, Media and Technology. Creative Digital Intelligence. Conference Proceedings, USJ Academic Press, 2-8.



Bowl repaired by Prof. Yohei Nishidate

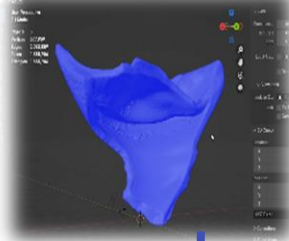
Project: Virtual modeling of the fragmented works of plastic arts

Extending our earlier works on pottery restoration with an idea of creating 3D models and digitally fabricated artifacts to be used for educational and research purposes, including reconstruction of the lost or damaged objects available only in fragments

Restoration Workflow

Modeling and Training Workflow

Extra Outcome



Area: Performing Arts



CONTENTS

SYNOPSIS	24
THE SWAN'S LONG SWIM TO GRACE Tim Scholl	28
TCHAIKOVSKY AND THE IMPERIAL THEATRES Rosamund Bartlett	34
STRANGE AND MANFOLD MUSIC Gavin Plumley	38
MARIUS PETIPA Tim Scholl	44
LEV IVANOV Tim Scholl	46
LIAM SCARLETT Debra Craine	48
BIOGRAPHIES	52



CAST

Odette/Odile
Prince Siegfried
The Queen
Von Rothbart
Benno
Prince Siegfried's Younger Sisters

Marianela Nuñez
Vadim Muntagirov
Elizabeth McGorian
Gary Avis
Luca Acri
Isabella Gasparini, Sae Maeda



Project: Personalized virtual theater diary

General Concept

- Manageable information representing the links between/to:
 - Work
 - Title, genre, creation time, ...
 - Author
 - Composer, choreographer, ...
 - Director, stage designer, costume designer ...
 - Performer
 - Dancer, Musician, Singer ...
 - Beholder
 - Attending performance date, watching stream,...
 - Traveling experience
 - Personalized list of favorites, etc.
 - Media
 - DVD, Blue-ray, video file, stream, ...
 - Images, posters, ...
 - ...

Informal and
personalized



Area: AI-Driven Generative Arts

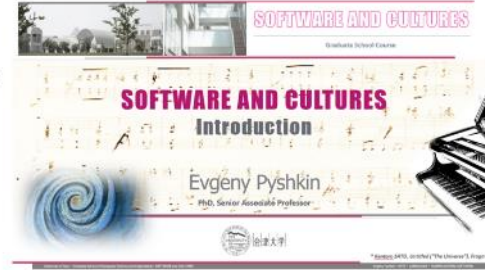
In connection with the graduate course “Software and Cultures”

AI Art vs Conventional Art

Aspect	Generative AI  	Conventional Art  
Speed	 Very fast, can create art in minutes	 Takes days or weeks to complete a detailed artwork
Cost	 Cheaper, reduces expenses for companies	 More expensive, requires hiring artists
Accessibility	 Easy to use, no artistic skills needed	 Requires training and years of experience
Scalability	 Can create a large volume of content quickly	 Limited, as humans need time to create each artwork
Originality	 Lacks emotional depth and unique creativity	 Every artist has a personal style and vision
Job Impact	 Replaces traditional artists, causing job loss	 Supports jobs for artists, illustrators, and designers
Ethical Issues	 Raises concerns about ownership and fairness	 Artists own their original work and creative rights

Designing the Course “Software and Cultures”: Grounds and Objectives

- Targeting the problems of technocratic education, which prioritizes the development of professional skills over serving students’ needs across all aspects of their life.
- With ubiquitous access to technology support, the young who are assumed to be AI-literate but are actually AI-dependent
- The technology/engineering students are not actively engaged in understanding the serious arts, the latter including both traditional and paradoxically those appealing to the contemporary vision and involving generative AI.



6

Project: Critical analysis of AI generative visual art works through AI-driven reviewing

The project addresses the challenges of the present-day AI-driven visual arts

- Impact on traditional arts;
- The possibilities they provide;
- The risks they brings to humanity.

The work is about developing a platform for reviewing AI-generated art with combining the human expertise with AI-driven image analysis.



Poster for a new zombies movie. It is a zombies movie but it is about cats vs zombies. The main character is a Bombay cat. The poster has the shape to be placed in theaters.

- By Bryand Flores

Flores Medina, Bryan José
(2025) Impact of Generative AI
on Art Creation and Media
Production. "Software and
Cultures" Course, Final
presentation.

Project?.. thinking ...

Couldn't decide on the topic?



DO YOU HAVE YOUR OWN CREATIVE IDEAS?

- ***Come to our team, and we will organize a brainstorming session!***

Join our team...

... if you are creative
... if you want to create high class software, including software for mobile devices
.... if you are interested in joining our international projects and working in an international community
.... if you are interested in cross-disciplinary projects

... and if you love

art,

music,

poetry,

dance,

architecture...

