

# Denys Pustovyi

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https://github.com/PDionys

https://pdionys.github.io/pdenys.portfoliosite/

A graduate of the Master's program at Kyiv Polytechnic Institute, focused on developing algorithms and back-end logic for software applications. The Master's theses, written in Python using neural network technologies, were graded 95 out of 100. Aimed at growth in programming and creating high-quality solutions.

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## Skills

Programming Languages: Java, Python. • Technologies and Tools: Microsoft SQL Server, PyQt, GitHub, Jakarta EE, Neural Networks. • Additional Skills: Experienced in HTML and CSS, experience with Unity, knowledge of AR technologies, React, Flask. • Soft Skills: Ability to follow instructions, Feedback processing, Flexibility in learning, Modesty, Constructive communication, Effective work under tight deadlines, Responsibility, Continuous learning, Discipline, Active listening, Openness to new things, Information gathering, Self-learning, Systems thinking.

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## Education

JUNE 2023 Y.

[Bachelor's Degree in Information Systems and Technologies](#)/National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

DECEMBER 2024 Y.

[Master's Degree in Software Engineering](#)/National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

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## Languages

Ukrainian – Native

English – B1 Technical

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# Projects

## Application-Builder for Dataset Formation and Neural Network Training

Description: An application that facilitates the efficient creation of datasets for training neural networks in classification tasks.

Tasks: Development of a system for automated dataset generation. Implementation of a system for automated creation of neural network models. Organization of the training process for the created models.

Role: Independent development.

Tools: Python, PyQt5, TensorFlow, PyTorch.

Outcome: Developed a user interface for the application, ensuring ease of interaction. Implemented functionality to expand the input dataset 10x using augmentation methods. Enabled the generation of image classification models achieving accuracy above 68% with a limited number of epochs.

Resource Access Mode: <https://github.com/PDionys/DiplomProject>

## Text-to-Speech Application Powered by Neural Networks

Description: A prototype of an application that allows generating speech from text based on a recorded and edited audio track.

Tasks: Creation of a text-to-speech generation system. Development of a sound recording and editing system for subsequent playback.

Role: Independent development.

Tools: Python, PySide6, Coqui-TTS, Pydub.

Outcome: A user interface for text-to-speech generation has been developed, ensuring seamless user interaction with the system. Algorithms for recording and editing audio signals using 6 filters have been created. Support for 5 different End-to-End voice models has been implemented to generate high-quality sound.

Resource Access Mode: <https://github.com/PDionys/Text-To-Speech-Prototype>

## Real-Time Chat Application

Description: A chat application built using Flask and React.

Tasks: Allow users to register, log in, communicate in multiple chat rooms, and send/receive messages in real-time.

Role: Independent development.

Tools: Python, Flask, SQLite, React, Socket.IO

Outcome: Mastered Flask and React technologies. Used SQLite as the database. Designed a relational database. Implemented a chat website using web-socket.

Resource Access Mode: <https://github.com/PDionys/WebDictionary>

## AR Assistant

Description: A 3D assistant in augmented reality, developed for use on devices with the Android operating system.

Tasks: Designing the User Experience Flowchart. Creating Wireframes. Developing the prototype.

Role: Team development.

Tools: Unity, C#, Blockbench.

Outcome: As a result of my work, 7 wireframes for the project were created. I developed the codebase for the functioning of the AR assistant.

Resource Access Mode: <https://github.com/PDionys/Real-Time-Chat-Application-flask-react->

## Lovecraft-Mod-Fabric-1.19

Description: A small mod for Minecraft that includes a new resource for the player and the implementation of a notebook system. Tasks: Studying a new API. Working with the code of an already released product. Testing personal skills in solving non-trivial tasks.

Role: Independent development.

Tools: Java, Fabric, Audacity

Outcome: A new resource for the player was created. Mechanics for resource loss were implemented: upon contact with a monster every 1000 milliseconds or when in darkness every 8000 milliseconds. A note system with audio and visual display was created. Mechanisms for adding entries to the notes were implemented: during the first server entry or after picking up a specific item.

Resource Access Mode: <https://github.com/PDionys/Lovecraft-Mod-Fabric-1.19>