

# Viktoriia Tytarenko

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<https://github.com/Toressy> 

<https://toressy.github.io/Portfolio> 

[Viktoriia/](#)

<https://www.kaggle.com/toressy> 

I'm a recent Computer Science graduate with foundations in Python, SQL, and data analysis tools (Pandas, NumPy) seeking an opportunity to apply my technical skills in a real-world setting. I'm passionate about NLP and LLM, have experience in transformers(BERT, SBERT), PageRank and model evaluation (ROUGE/BERTScore).

## Projects

- 1. *Airplane Fleet Database***
  - [GitHub Repo](#) | Designed a normalized SQL database (3NF) with automated reporting.
  - *Skills:* SQL, Data Modeling
- 2. *Flight Operations System***
  - [GitHub Repo](#) | Built a PHP/MySQL system with role-based access and CRUD operations.
  - *Skills:* Data Integration, Automation
- 3. *Graph-Based Summariser***
  - [GitHub Repo](#) | Developed an NLP summarization system using PageRank and SBERT (BERTScore: 0.892).
  - *Skills:* Python, Transformers (Hugging Face), Graph Algorithms (NetworkX), ROUGE/BERTScore
- 4. *AutoInsureApp***
  - [GitHub Repo](#) | Developed an insurance management system with data visualization.
  - *Skills:* PHP, MySQL, Reporting
- 5. *Diabetes Prediction Model***
  - [View on Kaggle](#) | Achieved 99.64% accuracy using Python/Scikit-learn.
  - *Skills:* Python, Predictive Analytics

## Skills

### *Programming and Development*

- **Languages:** Python, C++, C#, HTML, CSS, JavaScript
- **Software Development:** Object-Oriented Programming (OOP), Unity projects (C#), Custom Language Design (Lexer/Parser/Interpreter in Python)
- **Game Development:** DirectX, Unity
- **Web Development:** Flask (Backend), REST APIs.

### *Database and Data Analysis*

- **Database Management:** SQL (MySQL, MS SQL), NoSQL Basics, Query Optimisation
- **Data Analysis Tools:** Pandas, NumPy, MS Excel (Advanced), MS Access
- **Data Visualization:** Matplotlib
- **Cloud:** AWS (EC2, S3, Lambda - Basic)

### *AI/ML & NLP*

- **ML Pipelines:** Scikit-learn, Model Evaluation
- **NLP:** Transformers (BERT, SBERT), Graph Algorithms (PageRank, HITS), Text Summarization
- **Tools:** Hugging Face, NLTK, NetworkX, ROUGE/BERTScore Evaluation

### *Tools and Platforms*

- Jupyter Notebook, MS Excel, MS Access, Maple, MS Access, Azure, Figma, Flask Deployment

### *Languages*

- English (Upper Intermediate)
- Ukrainian (Native)
- Russian (Fluent)

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## Experience

JUNE 2021 – AUGUST 2021

### Assistant / CHECK IN SEA, Kyiv, Ukraine

- Researched and managed client databases using Google Sheets.
- Presented products to potential clients and facilitated direct sales.
- Handled administrative tasks and maintained documentation.

JUNE 2024 – JULY 2024

### Stockroom Assistant / British Heart Foundation, Burton on Trent, UK

- Assisted in sorting, pricing, and organising donated items to optimise inventory for retail sales.
- Provided friendly and efficient service to customers, answered queries, and promoted fundraising initiatives.

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## Education

2022 - 2025

### Computer Science / University of Derby, Derby, UK

**Key Modules:** Software Development, Cloud Computing, Computer Networks, IoT System Management, System Administration (Linux)

#### Projects

- Insurance management system with data visualisation (HTML, CSS, PHP, JavaScript, Chart.js)
- 2D Platformer Game (Unity, C#) - Developed a physics-based game inspired by "Red Ball," with level progression and interactive gameplay.
- DirectX Graphics Engineering (DirectX, C++) – Developed a 3D animated robot using DirectX 11, featuring scene graphs, dynamic transformations, per-pixel lighting, and textured models.
- Enterprise Database System (MS SQL Server, MS Access, SQL) – Designed a normalised database (3NF) with E/R diagrams, SQL scripts, and a functional MS Access front-end for enterprise operations
- Custom Programming Language - Designed a lexer, parser, and interpreter in Python, supporting data structures, control flow, global/local variables, and functions.
- Medical AI Solutions - Developed a machine learning pipeline (Python, Scikit-learn) to predict diabetes with 99.64% accuracy.
- Dissertation: "Graph-Based Extractive Summarisation Using Transformers" - Leveraged S-BERT embeddings and PageRank to optimise summary coherence.

2020 – 2025

### Applied Mathematics / Taras Shevchenko National University of Kyiv, Ukraine

Advanced studies in Mathematics, covering Discrete Mathematics, Differential Equations, Operations Research, Probability Theory, Mathematical Statistics, Functional Analysis, and basic OS Architecture.

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## Hobbies

- Sailing: Licensed sailor with a passion for the open waters, currently training to cross the ocean.
- Chess and Checkers: Enjoy strategy games to enhance analytical and problem-solving skills.
- Active Lifestyle: Ice skating, jogging, and swimming to maintain physical fitness and mental clarity.
- Knitting and Crocheting: Create homemade items as a relaxing and creative pastime.
- Book Reading: Particularly enjoy crime and detective genres to challenge my thinking and analytical abilities.