





Viktoriia Tytarenko

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<https://github.com/Toressy> 

Detail-oriented Computer Science graduate with strong Python, SQL, and machine learning skills. Experienced in building ML pipelines, working with Scikit-learn, NLP using Transformers, and visualising data with Matplotlib. Proficient in data manipulation with Pandas and NumPy, with a solid foundation in database design and cloud tools like AWS and Flask.

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 (Accuracy Metrics, Cross-Validation)
- **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)

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.

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.

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.
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