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https:/github.com/Toressy
https://toressy.github.io/Portfolio_Viktoriia/
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Viktoriia Tytarenko

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)

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.

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.