

# ANASTASIYA BYELYAKOVA

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## SKILLS

### Programming & Data Science

Python, OOP, SQL, MongoDB  
Statistical Analysis, FAISS  
Machine Learning, Deep Learning  
N8N

### Cloud Technologies

AWS S3, EC2, Lambda, Redshift  
Google Compute Engine

### AI Technologies

Gemini, ChatGPT, LangChain

### Technical Specializations

Natural Language Processing  
Web Scraping  
Data Processing & Visualization  
Machine Learning & Deep Learning

### Tools & Frameworks

TensorFlow, Keras, scikit-learn  
pandas, numpy, matplotlib, seaborn  
spaCy, transformers, NLTK  
Flask, Docker, PySpark, Dask  
selenium, playwright

## CERTIFICATIONS

Programming for Everybody (Python)  
Coursera

The Data Scientist's Toolbox  
Coursera

Python for Genomic Data Science  
Coursera

Algorithms for DNA Sequencing  
Coursera

Bioinformatics Methods I & II  
Coursera

Introduction to Genomic Technologies  
Coursera

Finding Hidden Messages in DNA  
Coursera

Nanotechnology and Nanosensors  
Coursera

Systems Biology Methods  
Coursera

Python Programming Projects  
Udemy

SQL Fundamentals  
Sololearn

Diploma in C Programming  
Alison

## PROFESSIONAL EXPERIENCE

### Data Analyst

Kyros AI

August 2021 - June 2025

- Scraped websites to extract data, details and answers using extensive NLP techniques with spaCy and transformers for text cleaning, NER and summarization
- Integrated AI technologies (Gemini and ChatGPT with LangChain) including FAISS for enhanced data processing
- Performed image processing for websites including background optimization and cropping
- Built predictive models for university ROI and student acceptance probability using machine learning
- Developed predictive models for summer program selectivity using TensorFlow, scikit-learn and XGBoost
- Created classification models for categorizing essay examples using scikit-learn and XGBoost
- Developed advanced chatbots to answer student inquiries using AI technologies
- Analyzed acceptance rates using AI models and statistical methods
- Developed Python scripts for automating data processing workflows
- Conducted research on educational materials contributing to new learning resource development
- Processed PDF files to extract specific information using AI and TensorFlow tools

### Data Analyst

DataObrii

May 2017 - August 2021

- Created spaCy models for POS tagging and named entity recognition in text processing
- Developed NLTK models for text chunking and natural language processing
- Built web scraping solutions to extract job opening information from company platforms
- Implemented CNN classifiers for image recognition using transfer learning on Inception v3 (TensorFlow) for COVID detection on lung X-rays, dog breed classification, cosmetics brand recognition, and real-time car counting
- Developed LSTM models for sales volume prediction based on historical data using Keras
- Created Flask APIs for MongoDB database access and user authorization systems
- Built LSTM and Random Forest models for financial price direction prediction
- Performed statistical analysis of Indian company price datasets using pandas, matplotlib, and seaborn

### PhD Student & Researcher

Università degli Studi di Siena

February 2014 - February 2017

- Analyzed olive oil samples for acidity compliance with European Regulations No 2568/91 and No 2015/1830
- Performed chemical characterization of olive oil, fruits, leaves, and pomace samples
- Conducted antioxidant activity analysis using TEAC assay and spectrometric methods
- Quantified polyphenols content using Folin-Ciocalteu method
- Performed ion content analysis (K, Na, Ca, Mg, Mn, Cu, Zn) using atomic absorption spectroscopy
- Optimized RH-HPLC-MS methods for polyphenolic compound quantification
- Investigated olive oil production by-products for quality improvement applications

### Teaching Assistant

University of Geneva

February 2013 - October 2013

- Contributed to research in photoswitchable Na/pH optical and potentiometric sensors
- Developed optical sensor nanoparticles for UV-Vis absorption and fluorescence applications
- Worked on fluorescence-based optical sensors for calcium detection

## EDUCATION

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### Master of Science (MSc) - Analytical Chemistry

[Taras Shevchenko National University of Kyiv](#)

2010 - 2012

**Thesis:** "Determination of 1,4-Dioxane by headspace GC with preconcentration by SPE"

**Coursework:** Gas Chromatography, HPLC, Environmental Analytical Chemistry, Physical Methods of Analysis, Nanochemistry, Pharmaceutical Chemistry, Instrumental Analysis, Bioanalytical Chemistry, NMR Spectroscopy

### Bachelor of Science (BSc) - Chemistry

[National University of Kiev-Mohyla Academy](#)

2005 - 2009

**Thesis:** "Modification of PETF membranes by graft-copolymerization of N-VIA initiated by AIBN"

**Coursework:** Biochemistry, Genetics (General & Molecular), Cytology, Histology, Virology, Microbiology, Developmental Biology