Alena Chigvintseva

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EDUCATION

BSBI, Germany (Teaching) | UCA, UK (Awarding) **Berlin, Germany**
Bachelor of Science (Hons) in Computer Science and Digitization Expected Graduation: February, 2026

- **GPA:** 78 / 100 (UK), equivalent to 1.3 / 4.0 (German Grading System)
- **Relevant Modules:** Fundamentals of Computer Science, Mathematics, Algorithms and Problem-Solving using Python, Database Design and Implementation, Machine Learning and Visualization, Predictive Analysis: Classifications, Regression, Clustering, Statistics, Computer Science for Digital Engineering (C++, CAD)

TECHNICAL SKILLS

Programming Languages:	C++ (incl. OpenGL), Python (incl. pandas, sci-kit learn, numpy), SQL
Web Development:	HTML5 protocol, CSS3, JavaScript
Tools & Software:	GIT (Version Control System), GitHub, MySQL Workbench, UML, Tableau, CAD

PROJECTS & EXPERIENCE

Green Screen Image Processing Algorithm **Algorithm / Software Development**

Technologies: *JavaScript, HTML, CSS*
Objective: Built a front-end and back-end green screen algorithm to remove image backgrounds.
Results:
- Processed images for background removal using DOM manipulation.
- Created an interactive UI with HTML/CSS and managed processing logic

Skills: JavaScript, image processing, full-stack development.

C++ Cosine Similarity Algorithm **Algorithm / Software Development**

Technologies: *C++, Data Structures and Algorithms, OpenGL library*
Objective: Built a front-end and back-end green screen algorithm to remove image backgrounds.
Results:
- Achieved efficient processing with time complexity $O(n+mlogm)$.
- Used filtration, tokenization, and set structures for vocabulary, improving accuracy in document comparison and reducing processing time.

Skills: Algorithm design, set & map data structures, text processing.

Personal Portfolio Website **Web / Frontend Development**

Technologies: *HTML, CSS, JavaScript*
Objective: Developed a personal portfolio website with responsive-design.
Results:
- Designed a responsive, user-friendly layout highlighting technical competencies.
- Integrated interactive elements to enhance UI/UX and engagement.

Skills: Front-end development, UI/UX design, project presentation.

NYC Property Value Prediction, Academic Report (targeting publication) **ML & Regression Analysis**

Technologies: *Python (pandas, numpy, scikit-learn), Tableau, Lasso Regression*
Objective: Developed a Lasso Regression model to predict property values in NYC, analyzing over 20,000 property records with features.
Results:
- Achieved R-squared ~15%, RMSE: 259,143 USD on test data.
- Enhanced feature interpretability, pinpointing key valuation factors.

Skills: Data preprocessing, feature selection, predictive modeling.

Wine Quality Classification, Academic Report (targeting publication) **ML & Regression Analysis**

Technologies: *Python (pandas, numpy, scikit-learn), Random Forest, SVM*
Objective: Built classification models to assess wine quality based on chemical features.
Results:
- Achieved 94.8% accuracy in middle-level quality classification.
- Identified crucial properties e.g. alcohol and sulphates.

Skills: Hyperparameter tuning, feature importance analysis, data cleaning.

ADDITIONAL SKILLS & INTERESTS

Languages:	Fluent in English, Russian; Conversational Proficiency in German
Soft Skills:	Problem-Solving, Adaptability, Fast-Learning, Team Collaboration, Analytical Thinking
Project Management:	Knowledge of Project Life Cycle; Frameworks: Waterfall, Agile, Scrum, Kanban
Interests & Hobbies:	Machine Learning applications, Technologies (AI) in art, Tabletop Gaming