

Halit Vural

Lecturer



Personal Details

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- Rr. Sami Frasheri
Lagjia 18, 2001
Durrës
- Albania
- Turkish
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Languages

Turkish	Native
English	Fluent
Korean	Advanced
Bosnian	Upper Intermediate
Croatian	Upper Intermediate

Profile

Experienced academic and researcher with a Ph.D. in Machine Learning and over 15 years of experience in international higher education. Proven record in leading engineering faculties, accreditation processes, developing innovative curricula, and organizing national/international academic events. Active researcher in artificial intelligence, data science, and NLP with peer-reviewed publications and funded projects. Passionate about empowering students and contributing to institutional excellence through strategic leadership, interdisciplinary research, and collaborative academic development.

Education

Ph.D. in Machine Learning

Oct 2009 - Aug 2015

[International Burch University, Sarajevo](#)

Thesis: "A Feature Selection Approach to High-Dimensional Gene-Expression Data for Cancer Classification"

- Expertise in developing advanced feature selection techniques to handle high-dimensional and noisy gene-expression datasets for cancer classification.
- In-depth understanding of machine learning algorithms tailored for biomedical data analysis and their impact on improving diagnostic accuracy.
- Experience in addressing challenges related to small sample sizes and high feature dimensionality in microarray data through innovative computational methods.
- Knowledge of applying statistical and computational approaches to mitigate overfitting and enhance model generalisation in cancer prediction tasks.

M.Sci. in Computer Science Education

Mar 2006 - Feb 2009

[Korea University, Seoul](#)

Thesis: "Analysis on Effectiveness of Algorithms Teaching Method with Hands-on Activities for non-CS Majors"

- Evaluation of hands-on learning activities to improve student engagement and practical understanding of algorithms.
- Application of educational technology tools to support interactive and effective teaching methods in computer science.
- Computer Concepts Curriculum development activities and workshops for the National K12 Education Project by Republic of South Korea Ministry of Education

B.Sci. in Computer Engineering

Sep 1997 - Aug 2004

[Yildiz Technical University, Istanbul](#)

- Proficiency in programming languages such as C, C++, and assembly language for hardware interfacing and software development.
- Proficiency in Database Management Systems and File Management Systems with High level Data Structures
- Application of software engineering methodologies and tools for the design, development, testing, and maintenance of computer-based systems.
- Strong foundation in digital logic design and microprocessor system architecture to underpin the development and optimisation of computing hardware.

Employment

Lecturer

Sep 2025 - Present

[Epoka University, Tiranë](#)

- Delivered undergraduate and graduate-level computer science and ML courses
- Supervised engineering theses and lab projects

AI Engineer**Feb 2025 - Apr 2025**[TheLayoff.com, Minnesota](#)

- Built a large-scale content moderation pipeline analyzing 3M+ user posts from TheLayoff.com.
- Developed models for toxicity detection, PII redaction, and removal prediction using RoBERTa and BigQuery.
- Engineered balanced training datasets using temporal chunking to handle label imbalance over time.
- Deployed components using Vertex AI, BigQuery, and Cloud Functions for scalable, cost-effective performance.
- Designed robust model tracking, evaluation, and versioning workflows to support iterative experimentation.

AI Engineer**Feb 2024 - Jan 2025**[Etio Consulting, Philadelphia](#)

- Provided strategic AI solutions and project guidance
- Specializing in custom management solutions for small and medium-sized organizations.
- Focused on integrating new technologies to drive business growth for passionate clients.
- Responsible for developing and implementing AI-driven solutions tailored to unique organizational needs.

AI engineer**May 2024 - Nov 2024**[Cidentify.com, Lithuania](#)

- Integrated advanced AI models into Cidentify applications to enhance user experience and optimize recommendation systems.
- Ensured compliance with GDPR standards by developing privacy-preserving machine learning workflows and secure data handling processes.
- Designed and implemented a scalable AI infrastructure, enabling real-time personalized university recommendations for users worldwide.

ML Engineer**Dec 2022 - Dec 2023**[Mersys.com, Frankfurt](#)

- Built ETL pipelines using web scraping and MongoDB
- Developed scalable data processing systems using DataLake framework
- Collaborated across research teams, engineers, and interns

ML Engineer**Feb 2022 - Dec 2022**[Testifi GmbH, Munich](#)

- Developed state-of-the-art machine learning models with deep learning frameworks achieving 97% accuracy.
- Conducted experimentation in Natural Language Processing (NLP) using BERT models and developed innovative solutions.
- Demonstrated successful work in an agile method with a scrum team to develop and continuously improve ML solutions.

Dean of Engineering Faculty / Senior Lecturer**Jul 2015 - Jul 2021**[Tishk International University, Erbil](#)

- Led the Faculty of Engineering and supported Deans' Council initiatives
- Spearheaded curriculum development across six engineering departments
- Successfully gained ZeVA (Germany) accreditations for four departments
- Organized and chaired the annual National Innovation Competition in Engineering (NICE)
- Organized and chaired the annual International Engineering Conference (IEC)
- Organized and chaired the biannual International Conference on Architecture and Design (ICAD)
- Increased student enrollment and faculty revenue annually by 10-17%
- Secured project grants and partnered with industry for applied research
- Supervised undergraduate theses and postgraduate student research in Data Science
- Taught core and advanced courses in Machine Learning and Computer Engineering

Lecturer & Researcher

Mar 2009 - Jun 2015

[International Burch University, Sarajevo](#)

- Delivered undergraduate and graduate-level computer science and ML courses
- Supervised engineering theses and lab projects
- Published research in ML, gene expression analysis, NLP
- Contributed to SQL-based system designs and education projects

Computer Concepts Teacher

Mar 2007 - Nov 2007

[Rainbow International School, Seoul](#)

- Developed comprehensive lesson plans to introduce core computer concepts to high school students, enhancing their digital literacy and problem-solving skills.
- Implemented innovative teaching methodologies including interactive simulations and practical exercises to facilitate hands-on learning in computing.
- Utilised educational technologies and software tools to create engaging and accessible learning materials tailored for diverse student groups.
- Collaborated with colleagues to integrate computer science modules into the broader curriculum, ensuring alignment with educational standards and student needs.

Certificates

Machine Learning Model Deployment

Jan 2022

[Clarusway, US](#)

- Certified in deploying machine learning models using various platforms ensuring scalability and robustness.
- Skilled in transforming machine learning prototypes into production-ready applications for real-world use cases.
- Trained in implementing secure and efficient data processing pipelines to support deployed machine learning models.

Deep Learning

Feb 2022

[Clarusway, US](#)

- Completed comprehensive training in deep learning architectures including CNNs and RNNs.
- Gained practical experience in developing and deploying deep neural networks for real-world applications.
- Mastered advanced techniques in model optimisation, regularisation, and hyperparameter tuning.
- Demonstrated ability to translate theoretical concepts into practical solutions through project-based learning.

Natural Language Processing (NLP)

Apr 2022

[Clarusway, US](#)

- Completed comprehensive training on advanced natural language processing techniques including text classification and sentiment analysis.
- Gained practical experience in developing and deploying NLP models using state-of-the-art transformer architectures such as BERT and RoBERTa.
- Trained in applying NLP methods for real-world applications such as content moderation, toxicity detection, and personal data redaction.
- Developed proficiency in evaluating and fine-tuning NLP models to address language nuances and improve prediction accuracy.

Achievements

The full list is available on [Kaggle](#) and [Github](#) profiles.

- Utilized cutting-edge machine learning techniques for NLP for Amharic language analysis, achieving better accuracy with 92% in 2 months. - Logistic Regression, SVM, XGBoost.
- NLP state-of-the-art project for clone detection on coding data from developers achieving high accuracy with 98% in 6 months- CodeBERT, UniXcoder, Doc2Vec optimizations - word embeddings, transformers.

- Price Prediction on scraped data from an online trading company, achieving 82.5% accuracy in 6 months- ETL, Linear, Ridge, Lasso Regression, AdaBoost, XGBoost - Pandas, Numpy, Matplotlib, Seaborn.
- Microarray gene-expression analysis for cancer classification - PCA & SVD dimensionality reduction. Used 10+ models with 15+ microarray chips comparatively and reported improvements. Feature selection - Machine Learning Algorithms ANN, KNN, DT, RF, SVM.
- Deployed Large Language Models (LLMs) for various applications, ensuring high performance and scalability. - Llama-3, Mistral, and custom transformer models from HuggingFace.
- Developed predictive models for forecasting milk production using time-series analysis, resulting in accurate predictions and improved resource planning - Python, ARIMA, SARIMA, Time-series analysis, Data preprocessing.
- Conducted 20+ projects related to Machine Learning, Time-series, Deep Learning, and NLP.

- Vural, H., & Subaşı, A. (2015). Data-mining techniques to classify microarray gene expression data using gene selection by SVD and information gain. *Modeling of Artificial Intelligence*, pp. 171–182.
- Vural, H., & Subaşı, A. (2015). Microarray gene expression data classification using feature selection and Naïve Bayes classifier. *Balkan Journal of Electrical and Computer Engineering*.
- Vural, H., Doğru, N., & Subaşı, A. (2010). Information Security for Sustainable Development. *ISSD Conference*.
- Jun, S.J., Kim, S.B., Yum, Y.C., Jang, H.S., Choi, S.K., & Vural, H. (2007). PairProgramming in Online Programming Learning Environment. *IPSJ Symposium*.
- Hiroyuki, A., & Vural, H. (2007). The Activities Connecting between NPR and Programming-Turtle Algorithm with DoLittle. *ISPJ Symposium Series*.

- Artificial Intelligence & Machine Learning
- Natural Language Processing
- AI Systems & Applications
- AI Integration in Education Methodologies
- Curriculum Design for AI/ML Education
- Data Science & Analytics

Python

Java

C++

C#

SQL

MongoDB

TensorFlow

Scikit-learn

BERT

Dockerization

AWS

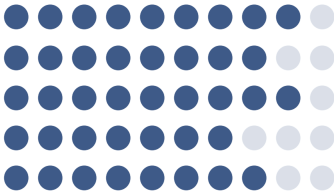
GCP

BigQuery

Git/Github

Soft Skills

Academic Leadership
Research Supervision
Public Speaking
International Collaboration
Project Management



Honors and Awards

- Certificate of Appreciation (Mentor) – Clarusway, USA (2022)
- Research Scholarship – International Burch University (2010)
- M.Sci. Student & Lab Scholarship – Korea University (2005)
- Turkish Prime Minister's National Scholarship (1997)
- TURSAD Full Undergraduate Scholarship (1997)