



Matei Debu

Nationality: Romanian ✉ Email address: matei.debu@unitbv.ro

🌐 LinkedIn: www.linkedin.com/in/matei-debu-0b9708186

🧠 Brainmap: <https://www.brainmap.ro/matei-debu>

👤 ORCID: <https://orcid.org/0009-0007-3087-8315>

🔍 Google scholar: <https://scholar.google.com/citations?user=CGSu-8oAAAAJ&hl=ro>

WORK EXPERIENCE

🏢 **Transilvania University of Braşov, Department of Electronics and Computers, ISOP Laboratory** – Brasov, Romania

Research Assistant

[01/02/2024 – Current]

EDUCATION AND TRAINING

Doctor of Philosophy - PhD

Transilvania University of Brasov [30/09/2025 – Current]

City: Brasov | Country: Romania | Website: <https://www.unitbv.ro/> | Field(s) of study: Electronics, Telecommunications and Informational Technologies | Thesis: Earth Observation Data Analysis for Applications in Agriculture

Master's degree

Transilvania University of Brasov, Mathematics and Computer Science Faculty [30/11/2022 – 30/11/2024]

City: Braşov | Country: Romania | Website: <https://www.unitbv.ro/> | Field(s) of study: Modern Technologies in Software Systems Engineering | Level in EQF: EQF level 7 | Thesis: Vizualizarea imaginilor spectrale și generarea hărților de indici de vegetație pentru extinderea funcționalității platformei software ESA SNAP

Psycho-Pedagogical Training Program Certificate – Level II

Transilvania University of Brasov [30/11/2022 – 30/11/2024]

City: Braşov | Country: Romania | Website: <https://www.unitbv.ro/>

Bachelor's degree

Transilvania University of Brasov, Mathematics and Computer Science Faculty [30/11/2019 – 30/11/2022]

City: Braşov | Country: Romania | Website: <https://www.unitbv.ro/> | Field(s) of study: Computer science | Level in EQF: EQF level 6

Psycho-Pedagogical Training Program Certificate – Level I

Transilvania University of Brasov [30/11/2019 – 30/11/2022]

City: Braşov | Country: Romania | Website: <https://www.unitbv.ro/>

Romanian Baccalaureate Diploma

Grigore Moisil National College of Computer Science [30/11/2015 – 30/11/2019]

City: Braşov | Country: Romania | Website: <https://moisilbrasov.ro/> | Field(s) of study: Mathematics and Computer Science, Intensive Computer Science

SKILLS

Precision Agriculture / Remote Sensing / Earth Observation / Hyperspectral Imaging / Multispectral Imaging / SAR Satellite / Data Analysis / Research / Image Processing / ESA SNAP / Python / Matlab / Communication Skills

LANGUAGE SKILLS

Mother tongue(s): Romanian

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PROJECTS

[05/01/2026 – Current]

Early Identification of Agricultural Crops (ELIAC) Research assistant

Link: http://miv.unitbv.ro/?page_id=628

[02/09/2024 – Current]

Platformă de fuziune și management a colecțiilor de date multi-sursă exploatabile de către modele cu inteligență artificială pentru estimarea și analiza predictivă a situațiilor de risc (AI4RISK) Research assistant

Link: <https://ai4risk.ro>

[01/09/2024 – Current]

Social Entrepreneurship Ecosystems Network (SEEN) Research assistant

Link: <https://www.linkedin.com/company/seen-project/posts/?feedView=all>

[18/07/2024 – Current]

Image intelligence pentru Marea Neagră, frontiere, mine (IMINT) Research assistant

Link: <https://sites.google.com/view/imint21/>

[01/02/2024 – 30/09/2025]

Romanian Excellence Center on Artificial Intelligence in Earth Observation Data for Agriculture (AI4AGRI) Research assistant

Link: <https://ai4agri.unitbv.ro>

PUBLICATIONS

[2025]

A PRISMA-based Hyperspectral Dataset for Agriculture IEEE WHISPERS, 12 - 14 November 2025, location - Barcelona, Spain

Authors: M. Debu, K. Marandskiy, Ș. Oprisescu, M. Ivanovici | **Journal Name:** IEEE Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing (WHISPERS)

[2025]

Towards the Discrimination of Wheat and Barley using Spectral Data IEEE WHISPERS, 12 - 14 November 2025, location - Barcelona, Spain

Authors: K. Marandskiy, M. Debu, M. Ivanovici | **Journal Name:** IEEE Workshop on Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing (WHISPERS)

[2025]

Multi-year multi-crop correlation analysis in Brasov area

Authors: I. Plajer, A. Băicoianu, M. Debu, M. Ștefan, M. Ivanovici, C. Florea, A. Ghinea, L. Majercsik | **Journal Name:** European Association of Remote Sensing Laboratories (EARSeL)

EARSeL, 26 - 29 May 2025, location - Prague, Czech Republic

[2025]

DACIAS: a Sentinel-1 and Sentinel-2 dataset for agricultural crop identification applications

Authors: A. Băicoianu, I.C. Plajer, M. Debu, M. Ștefan, M. Ivanovici, C. Florea, A. Cațaron, R. M. Coliban, Ș. Popa, Ș. Oprîșescu, A. Racovițeanu, Gh. Olteanu, K. Marandskiy, A. Ghinea, A. Kazak, L. Majercsik, A. Manea, L. Dogar | **Journal Name:** Big Earth Data journal

[2025]

Anomaly Detection on Water Bodies in SAR Data using Multi - Scale Features and Clustering IEEE MIGARS, 2 - 4 September 2025, location - Bucharest, Romania

Authors: A. Racoviteanu, M. Debu, K. Marandskiy, Ș. Oprîșescu, C. Florea, M. Ivanovici | **Journal Name:** IEEE International Conference on Machine Intelligence for Geoanalytics and Remote Sensing (MIGARS)

[2025]

Ship Detection and Statistics in Constanta Anchorage Using Sentinel-1 Data IEEE BlackSeaCom, 23 - 26 June 2025, location - Chișinău, Republic of Moldova

Authors: K. Marandskiy, A. Racovițeanu, I. Plajer, M. Debu, A. Kazak, M. Ivanovici | **Journal Name:** IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom)