EL HACHIMI CHOUAIB

Ph.D. candidate & full stack geospatial data scientist

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EDUCATION

Ph.D. candidate
Center for Remote Sensing Applications (CRSA)

- July 2020 – Ongoing   UM6P, Ben Guerir, Morocco

- Towards smart agriculture in Morocco: implementation of an intelligent data-driven agricultural decision support system

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Master of Research
Faculty of Sciences

- Sep 2017 – July 2019   UCD, El Jadida, Morocco

- Business Intelligence and Big Data Analytics

Bachelor Degree
Faculty of Sciences

- Sep 2012 – July 2017   UCD, El Jadida, Morocco

- Mathematics and Computer Science: Software Development and Databases Management

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High School Degree
6 November High School

- July 2012   Ouled Frej, El Jadida, Morocco

- Mathematic Sciences A

PUBLICATIONS

📄 Journal Articles

- C. El Hachimi, S. Khabba, S. Belaqziz, B. Ait Hssaine, M. H. Kharrou, and A. Chehbouni, "Are raw satellite bands and machine learning all you need to retrieve actual evapotranspiration?" *E3S Web of Conferences*, vol. 489, p. 04 019, 2024, ISSN: 2267-1242. DOI: 10.1051/E3SCONF/202448904019.

- C. El Hachimi, S. Belaqziz, S. Khabba, *et al.*, "ClimateFiller: A Python framework for climate time series gap-filling and diagnosis based on artificial intelligence and multi-source reanalysis data," *Software Impacts*, vol. 18, p. 100 575, 2023, ISSN: 26659638. DOI: 10.1016/j.simpa.2023.100575.

- O. Kaissi, S. Belaqziz, M. H. Kharrou, *et al.*, "Advanced learning models for estimating the spatio-temporal variability of reference evapotranspiration using in-situ and ERA5-Land reanalysis data," *Modeling Earth Systems and Environment*, pp. 1–25, 2023, ISSN: 23636211. DOI: 10.1007/S40808-023-01872-6/METRICS.

- B. Sebbar, S. Khabba, O. Merlin, *et al.*, "Machine-Learning-Based Downscaling of Hourly ERA5-Land Air Temperature over Mountainous Regions," *Atmosphere 2023, Vol. 14, Page 610*, vol. 14, no. 4, p. 610, 2023, ISSN: 2073-4433. DOI: 10.3390/ATMOS\\14040610.

- C. El Hachimi, S. Belaqziz, S. Khabba, and A. Chehbouni, "Data Science Toolkit: An all-in-one python library to help researchers and practitioners in implementing data science-related algorithms with less effort," *Software Impacts*, vol. 12, p. 100 240, 2022, ISSN: 2665-9638. DOI: 10.1016/J.SIMPA.2022.100240.

- C. El Hachimi, S. Belaqziz, S. Khabba, B. Sebbar, D. Dhiba, and A. Chehbouni, "Smart Weather Data Management Based on Artificial Intelligence and Big Data Analytics for Precision Agriculture," *Agriculture 2023, Vol. 13, Page 95*, vol. 13, no. 1, p. 95, 2022, ISSN: 2077-0472. DOI: 10.3390/AGRICULTURE13010095.

LIFE PHILOSOPHY

لاَ تَمَيُّزَ وَ أَثَرُ اَلْأَقْدَامِ أَمَامِي

PROJECTS

💧 FIRMA
Contributing as a full-stack geospatial data scientist to the design and implementation of a precision agriculture solution to implement sustainable agriculture in the Moroccan context.

📷 Quick Recharge
It is a mobile application for automating airtime refilling, which utilizes computer vision and deep learning techniques to extract digits from scratch cards and automatically make the refill based on the user's preferences.

🎛 3eddad
Participate as a full stack data scientist to the implmentation of a smart solution. The aim is efficiently managing domestic water use. The solution relies on AI to automate water meter data collection and offers multiple services for individuals and policymakers, such as water consumption monitoring, detecting water leaks, and billing management, among other things.

🔤 TopicDetector
It is an NLP-powered tool designed to analyze social media comments and accurately detect the topic and sentiment of each comment, providing valuable insights into users' impressions about the telecom operators in Morocco, helping to gauge opinions and improve customer satisfaction.

SKILLS

Data Science & Artificial intelligence

`Machine learning` `Deep learning` `Statistical modeling` `Data Mining` `Data Processing` `Data Visualization` `Natural Language Processing (NLP)` `Computer Vision (CV)` `Time Series`

Software, Web Development & Opps

`Python` `C & Cpp` `Java` `PyQt` `HTML, CSS and JS` `Material Design` `Bootstrap` `Django` `Flutter` `AWS` `Azure` `Linux Systems Administration` `GCP` `Git` `Jira`

- A. Naim, A. Aaroud, K. Akodadi, and C. El Hachimi, "A fully AI-based system to automate water meter data collection in Morocco country," *Array*, vol. 10, p. 100 056, 2021, ISSN: 2590-0056. DOI: 10.1016/J.ARRAY.2021.100056.

📖 Conference Proceedings

- C. El Hachimi, S. Belaqziz, S. Khabba, and A. Chehbouni, "Early Estimation of Daily Reference Evapotranspiration Using Machine Learning Techniques for Efficient Management of Irrigation Water," 1, vol. 2224, 2022, p. 012 006. DOI: 10.1088/1742-6596/2224/1/012006.
- C. El Hachimi, S. Belaqziz, S. Khabba, and A. Chehbouni, "Towards precision agriculture in Morocco: A machine learning approach for recommending crops and forecasting weather," Institute of Electrical and Electronics Engineers Inc., 2021, pp. 88–95, ISBN: 9781665429016. DOI: 10.1109/ICDATA52997.2021.00026.
- C. El Hachimi, S. Belaqziz, S. Khabba, and A. Chehbouni, "A reinforcement learning based approach for efficient irrigation water management," in *Proceedings of 2020 African Conference of Precision Agriculture*, 2020.
- A. Naim, A. Aaroud, C. El hachimi, and S. Saadani, "New embedded system for retrieving meter index," in *ACM International Conference Proceeding Series*, Association for Computing Machinery, 2019, ISBN: 9781450372404. DOI: 10.1145/3372938.3373012.

📒 Books

- C. El Hachimi and A. Aaroud, *Medical Use of Deep Learning: Malaria Testing Using Pre-trained ResNet*. Springer, Cham, 2019, vol. 1103 AISC, pp. 273–280, ISBN: 9783030366636. DOI: 10.1007/978-3-030-36664-3_31.

PEER REVIEW

Journals
- City and Environment Interactions, Elsevier.
- Climatic Change, Springer.
- Heliyon, CellPress.
- Smart Agricultural Technology, Elsevier.

Conferences
- 7th International Conference on Computer Science and Application Engineering.

PROFESSIONAL EXPERIENCE

Assistant Teacher
Discrete Mathematics
📅 2022-2023 Academic Year   📍 JUACS, UM6P, Ben Guerir, Morocco

Data scientist intern
Namyr Big Data Solutions
📅 February 2019 – July 2019   📍 Hassan, Rabat, Morocco

Big Data Management

RDBMS (MySQL, PostgreSQL, Oracle) | SQL | NoSQL(MongoDB) | Airflow | ETL | HPC | Power BI
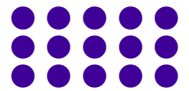
Geospatial Data

QGIS | Google Earth Engine | RasterIO | GDAL | Geopandas | Dask | LeafletJS | OpenLayers | PostGIS | GeoDjango | GEEMAP & LEAFMAP

EMBEDED SYSTEMS

Raspberry Pi | Arduino

LANGUAGES

Arabic
English
French
● ● ● ● ●
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CERTIFICATES

Scrum Product Owner | Data Analyst | Entrepreneurship | CISCO CCNA1 | TinyML | Accounting | AI & ML | Effective Business Model Canvas Develepement | Scopus | Web of Science

REFEREES

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