CURRICULUM VITAE
Gagan Narang
July 2023

CAREER SUMMARY

I am a doctoral in training at the Vision Robotics Artificial Intelligence (VRAI) lab of the Università Politecnica delle Marche in Ancona, Italy. With a research background in interdisciplinary computational science, I have demonstrated a holistic approach to problem-solving. I actively engage in research activities and have a strong interest in data-driven emerging technologies for positive social change. Currently, my research focuses on using artificial intelligence for water resource conservation. I have experience in technology orchestration, including data collection, analytics, and system development, gained through academic, research, teaching, and industry collaborations. My long-term goal is to translate technological advancements into tangible social welfare outcomes. My website: https://www.dii.univpm.it/gagan.narang

EDUCATION

2022-2025*	Università Politecnica delle Marche, **Ph.D. Information Engineering** Curriculum: Informatics Management and Automation Engineering *Industry Funded Project (by Jef Digital Innovation s.r.l)* Advisor: Dr. Adriano Mancini Co-Advisor: Dr. Primo Zingaretti
2020 – 2022 Master's Degree	University of Delhi, India, **M. Sc.** Major: Informatics. CGPA: 7.896 on a 10-point scale **(First Division with Distinction)** Advisor: Dr. Usharani Hareesh Govindarajan.
2015 – 2018 Bachelor's Degree	Lovely Professional University, India, **B. Sc. (Hons.)** Major: Physics. CGPA: 9.29 on a 10-point scale **(First Division with Distinction)**

ACADEMIC EXPERIENCE

Teaching Assistant:

Summer 2023	**Python for Advanced Data Analysis** The course focused on utilizing advanced libraries such as scikit-learn and tools to enhance data analysis capabilities. Assisted students in understanding and applying these libraries, reviewing code & support throughout their learning process.
Summer 2022	**Artificial Intelligence & Citizen Development for International Business** The course was organized to realize the theories in Data Management, AI, Natural Language Processing (NLP), and Digital Transformation (DT) through the Microsoft Power Platform and concepts of citizen development in an increasingly internationalized business context.
Spring 2022	**Data Structures using Python**, Nanjing Audit University, China. Head Teaching Assistant for the bachelor's course Data Structures using Python. Working closely with Prof. Shenglei Chen (Vice Dean Nanjing Audit University, China) for the course design and efficient delivery of the course.
Winter 2022	**Fundamentals of Information Systems**, emlyon business school, France.

During my appointment, the bachelor's course Fundamentals of Information Systems served the instrumental role of troubleshooting and mentorship students for the preparation and effective delivery of the course content.

Fall 2021 **Artificial Intelligence for IB**, SKEMA Business School, France.
Assisted in the teaching of the master's course Artificial Intelligence for International Business during my appointment with high teaching effectiveness evaluation (4.2/5). Additionally prepared troubleshooting videos due to pandemic restrictions.

Research:

Aug 2021 -Nov 2021 **Graduate Research Intern**, Shanghai Jiao Tong University, China
The theme of the internship was smart healthcare design and development which involved working with stakeholders across hospitals in Shanghai. Worked in collaboration with Ruijin Hospital to design clinical trials for incorporating technology in the design of open health management solutions for public use.

PUBLICATIONS

Journal: (corresponding author*)

Galdelli, A., **Narang, G.** Mancini, A., Zingaretti, P., & Govindarajan, U. H.* (2023). Emerging Digital Technologies Advancing Low-Carbon Maritime Operations: A Global Patent Grants Trend and Landscapes. *IET Collaborative Intelligent Manufacturing* [Work in Progress]

Govindarajan, U. H., **Narang, G.**, & Yadav, V.S., (2022). Blockchain Technologies and Health Care Providers: Adoption Barriers, Stakeholder Implications, and Emerging Trends. *Technology Forecasting and Social Change.* [Work in Progress].

Govindarajan, U. H., Raut, R. D.*, **Narang, G**. & Huang, H. (2023). A bibliometric and patent data co-occurrence analysis for the Internet of Things (IoT) technology applied in pollution monitoring. *IEEE Transactions on Engineering Management.* [Revision 1 sent].

Govindarajan, U. H.*, **Narang, G**., & Kumar, M. (2022) Graphic Facilitation in the Engineering Workflow: Adoption Framework, Barriers, and Future Roadmap. *IEEE Engineering Management Review.* doi:10.1109/EMR.2022.3200580.

Book Chapter:

Govindarajan, U. H., **Narang, G.**, Zivlak, N., & Yadav, V. S., (2022). Industry 4.0 Cross-Domain Blockchain Solutions in Healthcare: Trends and Clinical Considerations, *Computational Methods for Industrial Applications Series. CRC Press* [ISBN 9781032253664, e-access: https://bit.ly/3p9PpVi.

Conferences:

Mancini, A., Govindarajan, U. H., **Narang, G.***, Galdelli, A., & Bing, Z. W. (Year). Digital Technologies Improving Water Resource Engineering: Landscapes, Case Studies, Plotting Collaborations between Italy, China, and the United Arab Emirates. International Conference on Advancing Sustainable Future, Abu Dhabi, United Arab Emirates. [Work in Progress]

Fronzi, D.*, Galdelli, A., **Narang, G.**, Pepi, A., Mancini, A., & Tazioli, A. (2023). Towards groundwater-level prediction using Prophet forecasting method by exploiting a high-resolution hydrogeological monitoring system. In *6th Flowpath.* St Julian's, Malta. [Submitted]

Galdelli, A.*, **Narang, G.,** Domenico, A. I., Mancini, A., Migliorelli, L.& Zingaretti, P. (2023). An AI-Driven Prototype for Groundwater Level Prediction: Exploring the Gorgovivo Spring Case Study. In *22nd International Conference on Image Analysis and Processing (ICIAP 2023).* Udine, Italy. [Submitted]

Zhang, D., Govindarajan, U. H., Shi, Y., **Narang, G.**, & Lu, X. (2022, May). A Unified Blockchain Schema for Chronic Diet Management. In *2022 IEEE 25th International Conference on Computer Supported Cooperative Work in Design (CSCWD)* (pp. 1384-1389). doi: 10.1109/CSCWD54268.2022.9776136.

Acknowledgements:

Govindarajan, U. H.*, Zhang, D., & Anshita. (2021). Extended Reality for Patient Recovery and Wellness. Extended Reality for Healthcare Systems: Recent Advances in Contemporary Research. (Print ISBN: 9780323983815, e-ISBN: 9780323985390). **Reason:** *Data collection, interpretation, proofreading and information organization.*

PROJECTS

2022 **Support Poverty Alleviation & Rural Revitalization Through Cost-Effective Electric Mobility, "Internet+" Innovation & Entrepreneurship Competition**
Winner of **Bronze Award** by the Shanghai Regional Government, among thousands of international proposals for the funding pitch and is an effort to translate research into a product. My role was to provide health empirics in the use of e-mobility correlating it with financial revitalizations of marginalized communities.

2022 **Augmented Reality Supported Processed Food Proportion Estimation System. [under development], University of Delhi, India**
Technologies used: Android studio, TensorFlow, ImageNet V2
A hybrid approach combines computer-supported systems based on NOVA classification and utilizes Unity-3D a rule-based engine for augmenting interfacing.

2021 **Online Voting System, University of Delhi, India.**
Technologies used: Node.JS, Express (with MVC), Amazon Web Services
Developed a web-based e-voting system functioning to securely conduct elections. The motivation behind the digital platform is to investigate the future voting frameworks and eliminate the need to gather in-person votes.

2019 **Experimentation and Simulation on Biological Systems, Universität zu Köln, Cologne, Germany.**
Skillset: Julia, scientific presentation, bioinformatics, data analysis and modeling
Under the guidance of Prof. Mair, the exploration involved computer simulations to understand evolution, genetics, cellular decision-making, and gene expression. Studied the evolution of drug resistance, population genetics and evolution through a statistical analysis of experiments.

2019 **Seminar, Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn, Germany.**
Skillset: Extensive literature review, scientific presentation
The seminar helped me investigate recent trends in state-of-the-art medical imaging methods with my presentation on Medical Elastography.

ENGAGEMENTS

Conference Committee:

2023 Technical Committee Member, International Conference on Artificial Intelligence Big Data Computing and Data Communication Systems 2023, South Africa

2022 Youth Committee Member, International Conclave on Materials, Energy & Climate (ICMEC), Noida, India.

2022 Committee Member for the IEEE International Conference on Computer Supported Cooperative Work in Design (IEEE CSCWD 2022), Hangzhou, China. Additionally, Session Chair Assistant (Special Session: D2 & A6)

2021 Committee Member, International Conference on Artificial Intelligence and its Applications (iCARTI, 2021), Mauritius.

Social Media:

2022 Invited guest lecture: "Healthcare management using emerging technologies".

2021 Manager of YouTube channel with several thousand followers towards management of academic content. Created tutorial videos for students during remote learning conditions. Playlists managed include Job Market Videos, AI for IB and Fundamentals of Information Systems.

REFERENCES

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