**Dr. Apurvanand Sahay**
**a_sahay@bitmesra.ac.in**
**https://scholar.google.it/citations?hl=en&user=r9PtMIcAAAAJ**
**+91-8957436943**

| **Career Objective:** | |
|---|---|

To work in a challenging and fast paced research environment, leveraging my knowledge and fostering creativity with many learning opportunities and to earn respect. Doing research in the field of Model-Driven Engineering and Machine Learning along with the field if AI and Big Data. I aim to teach core computer science subjects such as Algorithms, Data Structures, User Interface Design, Machine Learning, etc.

**Educational Qualification:**

| Degree | School/College | University/Board | Year | Percent Marks/ Grade |
|---|---|---|---|---|
| Ph.D. | University of L'Aquila, Italy | University of L'Aquila, Italy | 2019-2023 | - |
| M.S. (Software Architecture) (dual degree with M.Tech) | University of L'Aquila, Italy | University of L'Aquila, Italy | 2017 – 2018 | 110/110 |
| M.Tech (Computer Science & Engineering) | Amrita School of Engineering, Bangalore, India | Amrita Vishwa Vidyapeetham, India | 2016 – 2018 | 8.75/10 (CGPA) |
| MCA | University of Lucknow, India | University of Lucknow, India | 2012 -2015 | 74.69% |
| B.Sc. (H) Computer Science | Ram Lal Anand College | University of Delhi, India | 2009 -2012 | 63.40% |
| 12TH | De-Nobili School Maithon, India | Indian School Certificate (ISC) | 2009 | 82.66% |
| 10TH | De-Nobili School Maithon, India | Institute Certificate of Secondary Education (ICSE) | 2007 | 79.28% |

**Ph.D.**

- Position – Ph.D. Student & Early Stage Researcher (September, 2019 to July, 2023)
  - Thesis Title : Cloud-Based Low-Code Model Transformations Composition and Execution
  - Project : Lowcomote Project (https://www.lowcomote.eu/esr/15/)
  - Funded Agency : European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 813884".
  - Supervisors : Prof. Davide Di Ruscio and Prof. Alfonso Pierantonio (University of L'Aquila)
  - Research Area – Model Driven Engineering
  - Technology Used: Eclipse, Java Programming, Epsilon Languages, MOMoT framework
  - Work Performed: Understanding a general overview of low-code platforms and elaborating on their features needs are examined extensively. Analysing the business process and data handling capabilities of various low-code platforms. Executed three tasks in model transformation composition: identifying possible model transformation chain, selecting best model transformation chain and optimizing the execution of model transformation chain. My Ph.D. thesis is given in this link https://tesidottorato.depositolegale.it/handle/20.500.14242/93164.

## Work Experience

- Position – Assistant Professor (November 2025 – Present)
  - University – Birla Institute of Technology Mesra, Offcampus - Deoghar
  - Job Profile – Teaching and Research work
  - Subject Taught – Design and Analysis of Algorithms, Artificial Intelligence and Machine Learning
  - Research Done – Submitted 2 conference proceedings to be accepted in "Procedia Computer Science" and 1 journal paper in the "The Journal of Supercomputing" in AI & ML fields.
  - Admin works – Taken viva for final year students for projects and courses such as C, Machine Learning, Expert System, etc.

- Position – Assistant Professor (January 2025 – October 2025)
  - University – Amity University Uttar Pradesh, Noida, India
  - Job Profile – Teaching and Research work
  - Subject Taught – Essential of Machine Learning, Analysis of Algorithms and Data Structures, Analytical Abilities and Computer Awareness
  - Research Done – Have published a conference paper in NLP. Also, working in AI techniques to identify disease such as Hypercardiomyopathy.
  - Admin works – Examined poster and research works of the students. Guide many students to do research in the field of machine learning and deep learning across various applications

- Position – Assistant Professor (March 2023 – December 2024)
  - University – Amrita Vishwa Vidyapeetham, Bengaluru, India
  - Job Profile – Teaching and Research work
  - Subject Taught – Data Structure and Algorithm, Design and Analysis of Algorithm, User Interface Design, Mining of Massive Datasets and Problem Solving and C Programming
  - Research Done – Completed research papers on Model Transformation Composition in **Model** Driven Engineering. Also, disease regression is done using Machine Learning algorithms along with DNA studies through AI and statistical techniques have been experimented. Studying application of Machine learning in Bioinformatics. Also, done research in intelligent algorithms such as Genetic Algorithms, ACO and other optimization algorithms.
  - Admin works – Done faculty advisor and counselling works, document verification, crowd management, managing workshops and judging coding competition.

- Position - Project Assistant - III (Senior Research Fellow) (April, 2019 to August, 2019)
  - Project Title : Intelligent Systems: Intelligent Technologies and Solutions (HCP - 0013)
  - Lab : CSIR - CEERI India & Hiroshima University Japan Joint R&D Lab, Pilani, India
  - Funded Agency : Council for Scientific & Industrial Research, Government of India
  - Principal Investigator : Dr Sanjay Singh, Scientist, CSIR - CEERI, Pilani, India
  - Tool Used : Neural Compute Stick (NCS), Raspberry Pi 3
  - Software Used: Python
  - Work Performed: Experimentation with pre-trained deep learning models and use it with Neural Compute Stick (NCS) with CPU and the Raspberry Pi and compare the results. Working with OpenVINO to build optimized inference engine for pre-trained deep learning models.

- Position - Junior Research fellow (September, 2018 to January, 2019)
  - Project Title : A Service-Oriented Framework for Smart Hospitals
  - Lab : Amrita Multi Dimensional Data Analytics(AMuDA) Lab, Department of Computer Science, Amrita Vishwa Vidyapeetham, India.
  - Funded Agency : Department of Science & Technology, Government of India
  - Principal Investigator : Dr Vidhya Balasubramanian, Professor, Department of Computer Science, Amrita Vishwa Vidyapeetham, India
  - Tool Used : RFID tags, antenna and reader
  - Software Used: Python, PostgreSQL database, RabbitMQ
  - Work Performed: Experimentation with RFID tags, readers and antennas and analyzing data extracted from the experiments using Python coding for estimating entry/exit counting in a room. Also, read and documented several literature surveys of sensors such as infrared sensors, UV sensors, etc. in smart applications such as smart building, smart offices, etc.

## Publications (Top 7 papers)

- Eisenberg, Martin, Apurvanand Sahay, Davide Di Ruscio, Ludovico Iovino, Manuel Wimmer, and Alfonso Pierantonio. "Multi-objective model transformation chain exploration with MOMoT". Information and Software Technology (2024): 107500.
- Sahay, Apurvanand, Davide Di Ruscio, Ludovico Iovino, and Alfonso Pierantonio. "Analyzing business process management capabilities of low-code development platforms." Software: Practice and Experience 53, no. 4 (2023): 1036-1060.
- Sahay, Apurvanand, Arsene Indamutsa, Davide Di Ruscio, and Alfonso Pierantonio. "Supporting the understanding and comparison of low-code development platforms." In 2020 46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), pp. 171-178. IEEE, 2020.
- Sahay, Apurvanand, and J. Amudha. "Integration of prophet model and convolution neural network on wikipedia trend data." Journal of Computational and Theoretical Nanoscience 17.1 (2020): 260-266.
- Thambi, S. V., Ishvarya, G., Kammari, K. S., & Sahay, A. (2025). Hybrid Metaheuristic Optimisation for Lung Cancer Image Classification: Leveraging MOEA, PSO, and ACO Algorithms. Procedia Computer Science, 258, 3781-3793.
- Vinay, K., Surya, V., Thushar, S., Singh, T., & Sahay, A. (2025). A Deep Learning Framework for Early Detection and Diagnosis of Plant Diseases. Procedia Computer Science, 258, 1435-1445.
- Sahay, A., Gopakumar, G., Gokulan, S., Subham, D., & Thakur, A. (2024, January). Applying Machine Learning Algorithms to Investigate Cervical Cancer. In 2024 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE) (pp. 1-5). IEEE.

## MS+M.Tech Project

- Project Title : Building a Graphical Modeling Framework and Comparative Analysis for Self-Adaptive Patterns.
- Platform used : Eclipse: CAPS Framework, Sirius; CapSim, CupCarbon.
- Contribution : Modelling, Simulation, Analysis, Paper Publication.
- Description : To build a modelling framework and compare the inherent ability of three architectural patterns (Synthesis Utilize Pattern, Synthesis Command Pattern and Collect Organize Pattern) to support certain quality attributes, specifically energy consumption and data flow rate.

## MCA 6th Semester Project

- Project Title : Online Sales and Inventory Management System
- Platform used : PL/SQL programming language, SQL Plus Database and Developer 6i.
- Contribution : Analysis, Design and Coding.
- Description : This system can be used to store the details of the inventory, update the inventory based on the sale details, produce receipts for sales, generate sales and inventory reports periodically etc. Thus, automation of all the sales and inventory works has been achieved.

## Technical Exposure:

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|---|---|---|---|
| Languages | Proficient in | : | C, C++, PL/SQL, R programming, Java |
| | Familiar with | : | Python, Eclipse, Javascript |
| Operating Systems | | : | Linux, Windows |
| Database Packages | | : | SQL, PostgreSQL |
| Web based Programming | | : | HTML+CSS, DOT NET |
| Area of Interest | | : | Model-Driven Engineering, Design and analysis of algorithm, Data Structures, Machine Learning |

## Certificates and training:

- Cyber-Physical Systems: Modeling and Simulation by University of California, Santa Cruz on Coursera. Certificate earned at Thursday, February 7, 2019 12:42 PM GMT. Certification URL is **https://www.coursera.org/account/accomplishments/verify/K7GTQYE88VT2**
- A certificate course of **ASP.NET** in C# language for 160 hours at HCL CDC, Lucknow.
- An **Oracle** summer training conducted at PNBIT Lucknow with PL/SQL language, developer 6i front end and SQL plus back end.

## References:

- Davide Di Ruscio, My Ph.D. guide, Professor, University of L'Aquila, Italy. Email – davide.diruscio@univaq.it, Contact - +393389549242
- Amrita Thakur, Assistant Professor (Selection Grade), Amrita Vishwa Vidyapeetham, Bengaluru, India. Email – t_amrita@blr.amrita.edu, Contact - +919901685326
- Tripty Singh, Associate Professor, Amrita Vishwa Vidyapeetham, Bengaluru, India. Email – tripty_singh@blr.amrita.edu, Contact - +919686102200

## Miscellaneous:

- Qualified **UGC National Eligibility Test (NET)** twice for Assistant Professor on December-2015 and July-2016.
- Qualified **GATE-2016** with 28.20 marks. My Gate Score is 386 out of 1000.

| **Personal Information:** | |
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| Date of Birth : | 28.11.1990 |
| Permanent Address : | S/o Sanjay Kumar Sahay, Flat - 4A, Galaxy Garden Sansikriti, Maithon, Kumardhubi Road, Merah, Dhanbad, Jharkhand. Pin - 828202 |
| Communication Address : | Jasidih, Deoghar, Jharkhand, India. Pin - 828207 |
| Nationality : | Indian |
| Languages Known : | English, Hindi |

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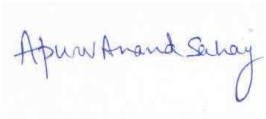

**Dr. APURVANAND SAHAY**