Dr. Arjun Magotra

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OBJECTIVE

I seek a leadership role in AI/ML and Deep Learning, where I can drive innovation, lead teams, and deliver impactful projects by leveraging my technical expertise and extensive experience.

SUMMARY

- **14+ years of experience** in AI/ML research, corporate projects, and academia, driving innovation and delivering scalable solutions.
- Proven expertise in **Neural Networks, Deep Learning, Computer Vision, NLP, and Generative AI**.
- Skilled at managing **cross-functional teams** and aligning AI strategies with business objectives.
- Advanced experience in **MLOps practices, cloud deployment**, and **full lifecycle project delivery**.

PROFESSIONAL EXPERIENCE

Healthark insights (on contract with Deloitte) **Bengaluru, India**
Senior AI Consultant 10/2024 - present

- Led the **Generative AI-driven factory maintenance project,** showcased at **MWC 2025 Barcelona,** implementing**:**
- **Llama2/Llama3.2, Hugging Face, and LangChain** for **multimodal architecture** combining **image and text inputs.**
- **RAG-based approaches** with **ChromaDB, DINOv2, Llava1.6, and vector databases** to deliver **actionable insights.**
- Seamless integration with **Node.js, React, ServiceNow, SharePoint,** and **Confluence.**
- Managed **system deployment** using **Docker, PostgreSQL,** and **AWS SageMaker,** ensuring **scalability and performance excellence.**

Healthark insights (on contract with Deloitte) **Bengaluru, India**
Senior AI Consultant 12/2023 - 09/2024

- Developed **computer vision pipelines** for **defect detection,** achieving **industry-leading 90ms inference times** for **real-time analytics.**
- **Directed MLOps strategies** including **CI/CD pipelines,** automated **retraining,** and **scalable deployments** for **Qualcomm PoC.**
- Collaborated on the **Deloitte US–Qualcomm US partnership,** delivering **strategic AI solutions** tailored to **manufacturing and supply chains.**

JAIN (Deemed-to-be University) **Bengaluru, India**
Asst. Professor 02/2023 - 12/2023
Delivered courses in **AI/ML, Data Science**, and emerging technologies while mentoring students on applied research projects..

Dongguk University AI Lab - Seoul, South Korea **Seoul, South Korea**
Research Associate 04/2016 – 02/2022

- Designed and deployed **deep learning** object recognition models for hardware accelerators using **CNNs** and custom **DNNs**.
- Led **meta-learning research** for **heterogeneous big data analysis**, funded by **VisionOnChip** and **the Ministry of Science** and **ICT**. • Published multiple **SCIE-indexed papers** advancing research on **Transfer Learning** and **Neural Plasticity**.

Yardi Systems **Pune, India**
Programmer Analyst, 07/2011 - 04/2016

- Delivered enterprise-level solutions by implementing Yardi Voyager using Oracle, SQL, .NET, and SSRS, leading team projects in real estate software solutions. • Directed a Crystal-to-SSRS migration and integrated international teams post-acquisition.

EDUCATION

Dongguk University – Seoul, South Korea *M.S. & Ph.D. Integrated Degree in Computer Science Engineering* | **2021** •
- **Grade**: MS 4.33/4.5 | Ph.D. 4.08/4.5
- **Ph.D. Dissertation:** Heterogeneous Transfer Learning in Image Classification Using Hebbian Principles and Neural Plasticity (DOI)

University of Pune – Pune, India *B.E. in Computer Science Engineering* | **2010**
- **Grade**: First Class
- **Project**: Intelligent Traffic Signals

SKILLS

Artificial Intelligence & Machine Learning
- Deep Learning, Computer Vision, NLP, Reinforcement Learning, Neural Networks, Generative AI

Programming Languages
- Python, C, C++, R, SQL, Linux

ML Frameworks & Tools
- TensorFlow, PyTorch, ONNX, Scikit-learn, Keras, Hugging Face, LangChain

Computer Vision & Data Processing
- OpenCV, DINOv2, Object Detection, llava1.6

Cloud & Infrastructure
- AWS SageMaker, Kubernetes, Docker, PostgreSQL

Development Practices

- MLOps, CI/CD Pipelines, Agile Methodologies

Data & Visualization

- Pandas, NumPy, Matplotlib, Seaborn, ChromaDB **Integrations & Platforms**
- RabbitMQ, MQTT, Node.js, React, ServiceNow, SharePoint, Confluence

ACCOMPLISHMENTS

- **MWC 2025**: Spearheaded a **Generative AI project** displayed at the Mobile World Congress, Barcelona.
- Published multiple **first-author SCIE papers** on Transfer Learning and Neural Plasticity.
- Winner of the **Dorahacks Seoul Hackathon**, developing AI-based personal identification software.
- Invited Speaker: **Niti Aayog Workshop on AI & Cybersecurity 2024**.
- Fully-funded scholarship recipient for M.S. and Ph.D. in a **Top-500 QS-ranked university**.

PUBLICATIONS

- **Neuromodulated Dopamine Plastic Networks for Heterogeneous Transfer Learning** – *Symmetry (2021)* (Link)
- **Improvement of Heterogeneous Transfer Learning Efficiency** – *Applied Sciences (2020)*
- *Transfer Learning for Image Classification Using Hebbian Plasticity* – CSAI (2019)

PROJECTS

- QT implementation: April 2016 Worked on a project using C++, QT library, and GLM library. final game project using Nvidia PhysX engine and C++ 11 core library. OpenGL API implementation with C++ 11 and Visual Studio:
- Oct 2016 2016 Unity Project with C#: Implemented OpenGL API library and framework for C++ development and command framework.
- 2017 Deep Learning — Development of an object recognition model for a hardware accelerator using CNN.
- Meta-Learning — Heterogeneous Big Data Embedding Image and text feature extraction and embedding to 200-dimensional vectors using CIFAR 100 and glove data-set. Displayed using Tensorboard and tSNE. RESULT: Clustering of similar image categories and using class hierarchy. https://www.youtube.com/watch?v=kWFPNMvVp5M&t=3s
- **Research Projects from** Next-Generation Information Computing Development Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT (NRF-2017M3C4A7083279), National Research Foundation of Korea (NRF) grant funded by the Korean government (MSIT) (2021R1A2C2008414) MSIT (Ministry of Science and ICT), Korea, under the ITRC (Information Technology Research Center) support program (IITP- 2021-2020-0-01789) supervised by the IITP (Institute for Information & Communications Technology Planning & Evaluation), Vision On Chip.