Amit Sharma, PhD

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Summary

- **5+ years of research experience** in building AI and Deep Learning solutions for real-world problems; recognized as a top innovator in Bosch Research in 2024
- **Entrepreneurial and interdisciplinary leader** with 7 patents (filed), 10 publications, and 9 internal invention reports
- **Skilled communicator** with proven ability to engage business stakeholders, global leaders, investors, and the international research community

Key Research Areas

Deep Learning, Generative AI, Computer Vision, Natural Language Processing (NLP), Vision Language Models (VLMs), IoT Sensor Systems

Technical Skills

- **ML & Cloud Technologies**
  - Certified Deep Learning Practitioner, Generative AI (GenAI), Computer Vision, LLMs, Vision Language Models (VLMs), Video LLMs, Named Entity Recognition (NER), Recommendation Systems
  - Image/Video/Audio Processing, Optical Flow, and ML techniques (Supervised & Unsupervised Learning including object detection, classification, regression, and clustering), Audio Processing
  - Cloud & API: AWS (Bedrock, Lambda, Sagemaker, Boto3), MS Azure, OpenAI, Serverless Frameworks
- **Tools & Frameworks**: Python (incl. data/visualization libraries), OpenCV, Open3D, LangChain, MLFlow, Docker, PyTorch, CI/CD, MCP, ONNX, Hugging Face
- **Soft Skills**
  - Strong communication (written and verbal), client-facing experience
  - Team leadership, project & resource management, product and market insight

Work Experience

- **Scientist,** *Data4Life Asia, Singapore,* **Sep 2024 – Present**

  Leveraging LLMs & embedding models for automatic transformation of medical research datasets, reducing manual processing time up to 40%

  Key Technologies: LLMs, Embedding Models, AWS, Azure, Python

- **AI Research Scientist,** *Bosch Research, Singapore* **Dec 2021 – Sep 2024**

  Spearheaded AI development—from ideation, technical design to demo & funding pitches, resulting in client PoCs and internal funding of €1m+.

  Key Technologies: Generative AI, Computer Vision, Deep Learning, LLMs, Python

- **Founder-in-Residence,** *Entrepreneur First (EF), Singapore,* **Jan 2021 – Nov 2021**

- **Member of Technical Staff,** *Mojo Networks, India,* **Jun 2014 – Jul 2015**

  Key Technologies: Python, JavaScript, HTML

Key Certifications

- **Deep Learning Specialization** 2024 (by DeepLearning.AI)
    - Convolutional Neural Networks (CNNs), Sequence Models, Hyperparameter Tuning, ML Projects Structuring, Deep Learning Fundamentals
- **Generative AI** 2024 (by Google)
- Machine Learning for **Production Systems** (DeepLearning.AI)
- AWS Certified AI Practitioner (by AWS) Ongoing

Education

- **PhD in Computer Science**, *SMU, Singapore* **Aug 2015 – Jun 2021**
  Dissertation: Vision-based Analytics for Improved AI-driven IoT Applications
- **Master of Technology** in Computer Science, *IIIT Delhi* **Aug 2012 – Apr 2014**
- **Bachelor of Technology** in Computer Science**,** *GJUS&T Hisar* **Aug 2008 – Apr 2012**

Key Patents & Inventions [More]

- **Amit S**, Archan M, Vengateswaran S, Youngki L. System for object identification and content quantity estimation through use of thermal and visible spectrum images. [Link]
- Tridib M, **Amit K**, Deepthi C, Koustuv D, Anirban M. Methods and Systems for transmitting information generated for events. [Link]
- **Amit S**, Sidharta A, Trung C. 3D features based object identification and alignment system for used end-of-life products [Link]
- **Amit S**, Bruce L, Kevin O. System and method for estimating a state-of-health value of a product for a disassembly process. [Link]

Key Publications [More]

- **Amit Sharma**, Archan M. SmrtFridge: IoT-based, user interaction-driven food item & quantity sensing. SenSys ’19, NY, USA [core a*| acceptance rate 18%] [Link]
- **Amit Sharma** et.al. CollabCam: Collaborative Inference and Mixed-Resolution Imaging for Energy-Efficient Pervasive Vision. ACM Trans. Internet Things (May 2025) [Link]
- **Amit Sharma** and Youngki Lee. 2017. AudioSense: sound-based shopper behavior analysis system. In ACM UbiComp ’17, Maui, Hawaii. [Link]
- **Amit Sharma** and Youngki Lee. 2016. Sound Localization using Smartphone. In proceedings of MobiSys ’16 Companion [Link]
- Y Kuldeep, **Kumar Amit**. Characterizing mobility patterns of people in developing countries using their mobile phone data. COMSNETS, 2014 [acceptance rate 17%] [Link]