Asim Munawar

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Personal Information

Authorized to work in	USA (permanent resident) | Japan (citizen) | Pakistan (POC holder)
Languages	English (bilingual) | Urdu/Hindi (native) | Japanese (professional proficiency) | Punjabi (bilingual)

Professional Summary

As an AI expert with 15+ years of professional experience, I have led successful projects across multiple industries, advancing technologies and driving innovation. In my 6+ years of management at IBM Research, I have overseen initiatives that push the boundaries of AI while fostering team development. Currently, I am leading efforts to enhance enterprise-grade large language models with advanced agentic workflow capabilities.

As a recognized thought leader, I contribute to advisory boards for several organizations and regularly deliver keynote presentations. I take pride in building high-performing teams and ensuring their success in dynamic, collaborative environments. My work has consistently focused on driving innovation and delivering real-world solutions that create a tangible impact.

Looking ahead, I am eager to lead cutting-edge projects, develop innovative AI solutions, and collaborate with forward-thinking organizations to shape the future of technology. I remain committed to fostering growth and achieving meaningful results that push the boundaries of what AI can accomplish.

Skills

Management Skills

Program/Project management | AI strategy | Leadership | Executive decision-making | Talent development | Client engagement | Thought leadership | Change management | R&D leadership | Keynote talks | Board/advisory roles | Agile methodologies | Strategic Planning

Technical Hands-on Skills

AI/ML | AI ethics and responsible AI practices | Large language models (LLMs) | Advanced Synthetic Data Generation | AI evaluation | API Augmented LLMs | Neuro-symbolic AI | NLP | Computer vision | Automation

Work Experience

IBM Research / Apr 2012 – to date (https://research.ibm.com/)

I joined IBM Research Tokyo and relocated to IBM TJ Watson Research Center, New York. During my career at IBM, I progressed from a researcher to senior management roles, gaining extensive experience and leadership responsibilities along the way.

Research Lead (Jan 2023 – to date)

I currently lead multiple research initiatives, guiding a cross-functional team of 20+ researchers to enhance LLMs on reasoning and planning. We focus on intermediate reasoning steps to improve interpretability. This has achieved over 20% gains for LLMs on well-known benchmarks. Under my leadership, we've built a high-performing, diverse team, contributing to deliver top models at IBM Research.

I also lead research on alignment methods for enterprise applications using RL with Human or AI Feedback (RLHF/RLAIF) and contribute to projects on multi-turn RAG and API-augmented LLM. My role combines people management, technical leadership, and hands-on development, driving efforts to push beyond SOTA in multi-turn grounded chat and reasoning, making it both challenging and impactful.

Project management | Tech lead | LLMs | RLHF/RLAIF | Reasoning | Synthetic Data Generation | RAG | API | NLP | Agile methodologies

Program Director for Neuro-Symbolic AI (Jul 2019 – Aug 2023)

I co-led design and led implementation of neuro-symbolic AI initiative, overseeing 50+ researchers working across 7+ teams worldwide. Under my leadership, the team demonstrated breakthrough results in NLU with RL. I successfully built an active community of 6k+ members interested in the neuro-symbolic AI. Some of the events I started have now become annual gatherings.

Program management | Keynotes| Event lead organizer | Strategic transformation | Neuro-symbolic AI | Organizational and analytical skills

Manager (Jan 2018 – Nov 2019)

My team had 12+ members. My responsibilities included hiring, technical lead, development plan for team members, leadership reviews, client engagements, project planning and delivery. Under my leadership, the team successfully delivered 10+ research and client projects.

People management | Technical lead | Recruiting | Client outreach | NLP | Robotics | Computer vision | Acoustics

Senior Researcher (Oct 2014 – Jan 2018)

Technically lead various projects including robot middleware, neuro-symbolic approach to robotics, precise industrial assembly tasks with AI, and conversational robotics. I started a new team for applications of AI. I was co-lead for GTO 2018, annual activity to curate bottom-up ideas.

Strategic transformation | Technical lead | Deep learning | Applications of ML

Researcher (Apr 2012 – Oct 2014)

I contributed to a project for efficient simulation and testing platform for a vehicle. Also developed an emulator for IBM TrueNorth processor (neuromorphic computing chip). I contributed to several other computer vision projects.

Computer vision | Deep learning | Neuromorphic computing

Executive Board member, Centaur AI, New York – Sept 2023 – to date (https://centaurinstitute.org/)
I am responsible to advise the non-profit institute on the part of the strategy concerning generative AI.

Tech Advisory Board Member, Packt (Mumbai, India) / Apr 2023 – to date (https://www.packtpub.com/)
I contribute by sharing my unique perspective and insight into specific areas of my expertise.

SIAB Board Member, NCAI (Islamabad, Pakistan) / Apr 2021 – to date (https://ncai.pk/)
I am a member of Scientific and Industrial Advisory Board (SIAB) at National Center of Artificial Intelligence (NCAI). SIAB is the experts technical body overseeing the research direction and performance outputs at NCAI. The role of SIAB is to advise the National Steering Committee as well as the central administration of NCAI in matters pertaining to scientific and industrial R&D.

Campus Ambassador at Sun Microsystems (Tokyo, Japan) / Oct 2008 - Feb 2010 (acquired by https://www.oracle.com/)
I created and led the Open-Source University Meet Up (OSUM) circle at Hokkaido University, organized monthly seminars, and helped students learn open-source technologies. I worked with Sun Microsystems until its acquisition by Oracle.

Design Engineer at CARE (Islamabad, Pakistan) / Jun 2003 - Mar 2005 (https://carepvtltd.com/)
Developed DSP and FPGA based image matching system and GIS based antitheft vehicle tracking system using GSM/GPRS and VHF as redundant communication channels. Development of central monitoring center was also part of the project.

Education

Postdoc – Hokkaido University, Japan / Nov 2011 – Mar 2012 (https://www.global.hokudai.ac.jp/)
Designed experimental portal for the largest academic cloud platform in Japan at the time

PhD – Graduate School of IT, Hokkaido University, Japan / Oct 2008 – Sep 2011
Thesis: Massive parallelization of Evolutionary Algorithms (a branch of AI with broad applications).

MSc – Graduate School of IT, Hokkaido University, Japan / Oct 2006 – Sep 2008
Computer science | Grade A+

Bachelor of Computer Systems Engineering – NUST, Pakistan / Dec 1999 – Jun 2003 (https://nust.edu.pk/)
CGPA: 3.875/4.0

Certifications

- 10+ Acclaim certificates/badges
- IBM Certified Manager (2020)
- Enterprise Design Thinking Practitioner (2017)
- Industrial robot safety certificate of completion, Occupational Health and Safety, Japan (2016)
- IBM SyNAPSE neuro-morphic chip boot camp, Almaden, USA (2014)
- Sun Certified Associate for Java Platform, Standard Edition (2010)

Selected Talks, Keynotes and Articles

- "How to improve LLM performance of reasoning and planning", Michigan State University (MSU) (virtual), Oct 2024
- "Foundation models for Robotics", ICRA@40, Johannesburg, South Africa, Sept 2024
- "How interpretability helps in AI governance", AI GOV workshop at IJCAI 2024, Jeju, South Korea, Aug 2024
- "LLM explainability for improving Trust", TrustML Workshop @ UBC, Vancouver, Canada Feb 2024
- "Reasoning with Large Language Models", CSR Club University Cadi Ayyad, Morocco (virtual), Nov 2023
- "Can LLMs Reason?", Dallas AI Meetup (Society of 6k+ AI professionals), Nov 2023
- "Generative AI and Large Language Models (LLMs)", 4th Pakistan AI Summit, March 2023
- "Neuro-Symbolic AI for LLMs", AI Techverse 2023 @ IEEE ICAI 2023, Islamabad, Pakistan, Feb 2023
- "Advancements in Neuro-Symbolic AI", IEEE ICAI 2022, Islamabad, Pakistan, April 2022
- "Introduction to Neuro-Symbolic AI", IEEE ICAI 2021, Islamabad, Pakistan, April 2021
- Interview by Don Monroe on the topic of "Neuro-Symbolic AI", Communications of the ACM, October 2022
- "How a shopping mall trip inspired me to work in neuro-symbolic AI", Careers in Computing, ACM Communications, May 2022
- Science Slam on "Safe Reinforcement Learning" (presented in Japanese language), IBM Think Japan, Tokyo Japan, June 2018

Technical Vitality

- 20+ US patents in AI and related areas (Justia)
- 80+ peer-reviewed publications (Google scholar)
- Professional memberships: IEEE | ACM | AAAI | RSJ
- Recently co-organized events: IBM NS workshop | NS summer school (yearly) | KBRL – IJCAI 2020 | KBCG – IJCAI 2023 | DL in RSJ 2018/2019 | NucLeaR – AAAI 2024 | AIGov – IJCAI 2024
- AI, computer vision, NLP and robotics patent evaluator at IBM from 2014-to date

Selected Awards & Recognitions

Best Paper Awards: SSII (2019) | IEEE SCC (July 2018) | SIG-ECF (Oct 2010)
Awards at IBM: Invention Plateau-6 (2023) | Manager's Choice Awards (2014, 2015, 2019) | Technical Master (2017) | Eminence and Excellence award (2014, 2015, 2016) | Technical Expert (2014)
Academic awards: MEXT scholarship for MS and PhD (2005-2011), MOST scholarship for BE (1999-2003) | Winner of software competition (2000, 2004) | Merit certificate for BE (2003) | Winner of Softcom quiz competition (2002)
Other awards: Sun Campus Ambassador of the Month (March 2009)