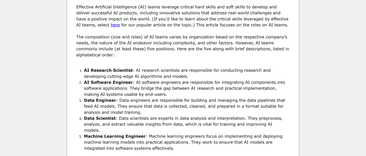
# Top 5 Roles on AI Teams

By October 2023

BY **SCOTT M. GRAFFIUS** | ScottGraffius.com




Effective Artificial Intelligence (AI) teams leverage critical hard skills and soft skills to develop and deliver successful AI products, including innovative solutions that address real-world challenges and have a positive impact on the world. (If you'd like to learn about the critical skills leveraged by effective AI teams, select here for our popular article on the topic.) This article focuses on the roles on AI teams.

The composition (size and roles) of AI teams varies by organization based on the respective company's needs, the nature of the AI endeavor including complexity, and other factors. However, AI teams commonly include (at least these) five positions. Here are the five along with brief descriptions, listed in alphabetical order:

- **AI Research Scientist:** AI research scientists are responsible for conducting research and developing cutting-edge AI algorithms and models.
- **AI Software Engineer:** AI software engineers are responsible for integrating AI components into software applications. They bridge the gap between AI research and practical implementation, making AI systems usable by end-users.
- **Data Engineer:** Data engineers are responsible for building and managing the data pipelines that feed AI models. They ensure that data is collected, cleaned, and prepared in a format suitable for analysis and model training.
- **Data Scientist:** Data scientists are experts in data analysis and interpretation. They preprocess, analyze, and extract valuable insights from data, which is vital for training and improving AI models.
- **Machine Learning Engineer:** Machine learning engineers focus on implementing and deploying machine learning models into practical applications. They work to ensure that AI models are integrated into software systems effectively.

The above five roles collectively cover key aspects of AI development — from research and model creation to software integration and deployment. Development requirements and characteristics (such as degree of complexity), additional positions may be needed.

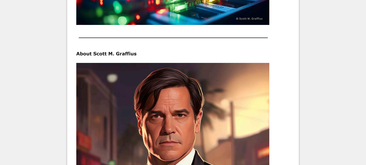
An expanded list of 20 roles common to AI teams follow. Here are the aforementioned 5 and 15 additional positions, listed in alphabetical order:

- **AI DevOps Engineer:** Combines development and operations skills to streamline AI model deployment. They automate tasks.
- **AI Ethicist:** Ensures that AI systems are developed and used responsibly and ethically.
- **AI Infrastructure Engineer:** Builds and maintains the infrastructure required for AI model deployment and scalability.
- **AI Legal and Compliance Specialist:** Ensures AI projects comply with legal and regulatory requirements.
- **AI Marketing Specialist:** Promotes and markets AI products and solutions to customers and stakeholders.
- **AI Operations (AIOps) Specialist:** Focuses on the operational aspects of AI, including monitoring, maintenance, and troubleshooting.
- **AI Product Manager:** Oversees the development and deployment of AI products.
- **AI Programmer:** Leverages general and specialized hard skills and soft skills, and applies their understanding of machine learning and artificial intelligence (such as machine learning, deep learning, automation, robotics, and natural language processing) to manage the planning, execution, and delivery of AI projects. Note: Titles vary by organization; the position may be called an Agile Project Manager, Technical Project Manager, Scrum Master, or another related designation.
- **AI QA Engineer:** Ensures the quality and reliability of AI models through testing and validation.
- **AI Research Scientist:** Conducts research to develop new AI algorithms and models.
- **AI Software Engineer:** Builds and maintains software systems that incorporate AI components.
- **AI Trainer/Annotator:** Prepares and labels data for training AI models, especially for supervised learning.
- **AI UX/UI Designer:** Designs user interfaces and experiences for AI-powered applications.
- **Computer Vision Engineer:** Specializes in developing AI models for image and video analysis.
- **Data Analyst:** Examines data to uncover trends and insights that can guide AI projects.
- **Data Engineer:** Manages data infrastructure and prepares data for AI model training.
- **Data Scientist:** Analyzes and interprets complex data to aid AI decision-making.
- **Deep Learning Engineer:** Focuses on deep learning models and architectures.
- **Machine Learning Engineer:** Focuses on implementing and deploying machine learning models.
- **Natural Language Processing (NLP) Engineer:** Specializes in working with text and language-related AI tasks.

The composition (size and roles) of AI teams varies, based on the complexity of the AI project and other factors. On smaller teams, individuals often 'wear multiple hats.' On larger teams, individuals typically have more specialized roles.

This article covered the roles common to AI teams. Listings are not exhaustive of all potential positions. Additionally, as the field of AI continues to evolve and advance, new roles may materialize to address emerging challenges and opportunities.

(If you'd like to learn about the critical skills leveraged by successful AI teams, select here for our popular article on the topic.)

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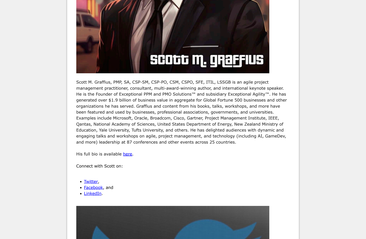
**About Scott M. Graffius**




Scott M. Graffius, PMP, SA, CSP-SM, CSP-PO, CSM, CSPO, SPE, ITIL, LSSGB is an agile project management practitioner, consultant, multi-award-winning author, and international keynote speaker. He is the Founder of Exceptional PPM and PMO Solutions™ and subsidiary Exceptional Agility™. He has generated over $1.9 billion of business value in aggregate for Global Fortune 500 businesses and other organizations he has served. Graffius and content from his books, talks, workshops, and more have been featured and used by businesses, professional associations, governments, and universities. Examples include Microsoft, Oracle, Broadcom, Cisco, Gartner, Project Management Institute, IEEE, Yale University, Stanford University, Massachusetts Institute of Technology, Harvard Business School of Education, New University, Tufts University, and others. He has delighted audiences with dynamic and engaging talks and workshops on agile, project management, and technology (including AI, GameDev, and more) leadership at 87 conferences and other events across 25 countries.

His full bio is available here.

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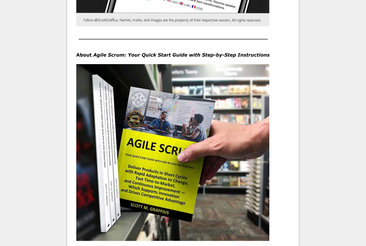


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***About Agile Scrum: Your Quick Start Guide with Step-by-Step Instructions***

Book available in the United States: **bit.ly/scrumone** And around the world: **bit.ly/world-agile**

Shifting customer needs are common in today's marketplace. Businesses must be adaptive and responsive to change while delivering an exceptional customer experience to be competitive.

There are a variety of frameworks supporting the development of products and services, and most approaches fall into one of two broad categories: traditional or agile. Traditional practices such as waterfall engage sequential development, while agile involves iterative and incremental deliverables. Organizations are increasingly embracing agile to manage projects, and best meet their business needs of rapid response to change, fast delivery speed, and more.

With clear and easy to follow instructions, the multi award-winning ***Agile Scrum: Your Quick Start Guide with Step-by-Step Instructions*** book by Scott M. Graffius (Wiley-Inspiration and Colin Griffen, Technical Editors) helps the reader:

- Implement and use the most popular agile framework—Scrum;
- Quickly and easily start cycles with rapid adaptation to change, fast time-to-market, and continuous improvements; and
- Support innovation and drive competitive advantage.

Hailed by Literary Titan as "the book highlights the versatility of Scrum beautifully."

Winner of 17 first place awards.

***Agile Scrum: Your Quick Start Guide with Step-by-Step Instructions*** is available in paperback and ebook/Kindle in the United States and around the world. Some links by country follow.

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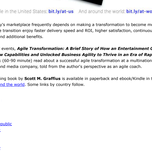
***About Agile Transformation: A Brief Story of How an Entertainment Company Developed New Capabilities and Unlocked Business Agility to Thrive in an Era of Rapid Change***

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Thriving in today's marketplace frequently depends on making a transformation to become more agile. Those successful in the transition enjoy faster delivery speed and ROI, higher satisfaction, continuous improvement, and additional benefits.

Based on actual events, ***Agile Transformation: A Brief Story of How an Entertainment Company Developed New Capabilities and Unlocked Business Agility to Thrive in an Era of Rapid Change*** provides a quick (90-90 minute) read about a successful agile transformation at a multinational entertainment and media company, told from the author's perspective as an agile coach.

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The short link for this article is: https://bit.ly/ai-roles.

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