

Editorial

AI Engineering: Shaping the Future of Engineering Disciplines with Artificial Intelligence

Yu-Dong Yao

Department of Electrical and Computer Engineering, Stevens Institute of Technology, Hoboken, NJ 07030, USA;
yyao@stevens.edu

How To Cite: Yao, Y.-D. AI Engineering: Shaping the Future of Engineering Disciplines with Artificial Intelligence. *AI Engineering* **2025**, 1(1), 1.

I am excited to introduce the first issue of *AI Engineering*. As the Editor-in-Chief, I am honored to lead this journal in exploring how artificial intelligence is transforming engineering.

1. Current Trends in AI and Engineering

We are at an important moment where AI is becoming central to engineering innovation. AI Engineering is launching at a time when combining AI with various engineering fields is not just promising but necessary for advancing technology.

AI is being applied in fields like aerospace, civil, mechanical, and electrical engineering, changing what is possible. Machine learning is improving structural design, enhancing predictive maintenance, and driving automation. AI-driven robotics is helping automate manufacturing and construction, cutting costs and improving precision.

Deep learning is used in environmental engineering to predict climate patterns, while AI-driven control systems are improving how we manage renewable energy. AI in engineering education is also crucial, preparing future engineers with both technical and AI skills.

2. Scope of AI Engineering

AI Engineering aims to capture the dynamic and evolving ways AI intersects with engineering. We publish research that not only extends technical capabilities but also provides real-world applications and addresses challenges. Our focus includes:

- Aerospace Engineering: AI for autonomous flight and optimization of aerospace structures;
- Civil Engineering: AI in smart city planning, infrastructure monitoring, and structural assessment;
- Mechanical Engineering: Machine learning for predictive maintenance and process automation;
- Electrical and Computer Engineering: AI in embedded systems, circuit optimization, and IoT applications;
- Chemical and Environmental Engineering: AI for process control, pollution monitoring, and sustainable engineering;
- Biomedical Engineering: AI for medical device innovation, diagnostics, and personalized healthcare;
- Industrial Engineering: AI for optimizing production systems, supply chain management, and process improvement;
- Robotics and Manufacturing: AI for adaptive control, precision automation, and quality assurance;
- Ethical Considerations: Addressing the ethical, societal, and environmental impacts of AI in engineering.

This broad scope will ensure that *AI Engineering* is a key source of the latest research and a platform for discussing AI's role in engineering.



3. For Authors, Reviewers, and Editors

The success of *AI Engineering* depends on collaboration. The dedication of authors, the thoroughness of reviewers, and the leadership of our editorial board are key to our journal's quality.

We support a fair editorial process that brings out the best in every submission. Constructive peer review, transparency, and scholarly rigor are our core values.

We value diversity and inclusion, knowing that new advances often come from different perspectives and multidisciplinary teamwork.

4. Outlook

As we begin the journey of *AI Engineering*, I see this journal as not just a collection of research but a community for engineers, researchers, and practitioners. Our goal is to create meaningful discussions that advance engineering in the AI era.

I invite researchers from all branches of engineering to contribute their work, challenge current practices, and help shape a future where AI is an integral part of engineering.

In closing, I thank everyone who has made *AI Engineering* possible. I am confident that our journey into the intersection of AI and engineering will be both enlightening and impactful.

Conflicts of Interest

The author declares no conflict of interest.