

Name of the Person: Sudharshan Tumkunta

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LinkedIn: [Linkedin](#)

Fellow criteria:

I, Sudharshan Tumkunta, am self-nominating for recognition as a Fellow of the Python Software Foundation due to my significant contributions to the Python community through leading PyTorch (<https://pytorch.org/>) architectural improvements, educating and mentoring individuals in Python, publishing company articles on machine learning, mentoring Python users worldwide, speaking at international conferences, and being a long-term contributor to Microsoft and Meta's Python communities.

Details:

- Sudharshan has made significant contributions to the Python community through his engineering and design efforts. At Meta, and previously at Microsoft, he has driven technological advancements in AI and ML optimizations, achieving cost savings of \$400 million in 2024.
- He has supported the Python community by leading architectural improvements to PyTorch (<https://pytorch.org/>), an open-source machine learning library developed by Meta/Facebook. His work with PyTorch, known for its dynamic computation graph, has facilitated the development of flexible machine learning models. Some of his recent projects include:
 - Leveraging scikit-learn for machine learning tasks such as classification, regression, and clustering.
 - Utilizing TensorFlow or Keras for building deep learning models, enabling complex machine learning and deep learning algorithms.
 - Leading initiatives like model consolidation and optimization to enhance AI/ML models, resulting in substantial cost savings.
 - Managing complex technical programs that drive business growth through AI/ML solutions using PyTorch Python.
 - Designing techniques to improve performance, scalability, and resource utilization of models, optimizing deployment to reduce latency and boost throughput.
- Sudharshan actively participate in the development of the Python language by reviewing code to ensure its quality and reliability and engaging in discussions with the internal Python community.
- As a Tech Lead, Sudharshan has spearheaded system optimizations and facilitated product launches, increasing returns by more than \$300 million for Meta's advertisers, thus accelerating value creation for the U.S. economy.
- At Microsoft, Sudharshan worked on various Python-based projects that involved designing, coding, and implementing complex systems. One of his notable experiences was playing a key role in designing a fast and efficient data acquisition process using Azure Data Factory, ADLS, BI Integration Service, and Analysis services with Python. Sudharshan utilized popular libraries like Pandas, NumPy, and Matplotlib to analyze and

visualize data, applied scientific computing concepts using SciPy and NumPy, and performed data science tasks, including data wrangling, visualization, and modeling. He created an ensemble machine learning model to predict revenue and other key metrics, analyzed time series data, and built forecasting models to predict future trends.

- Sudharshan's contributions to the Python community include promoting Python, teaching, and coordinating others. His involvement includes:
 - Educating and mentoring individuals in Python and related technologies.
 - Publishing internal company articles on machine learning.
 - Mentoring Python users worldwide, leading to significant skill improvements and earning recognition for exceptional volunteer efforts.
- He actively shares his research through scholarly articles
 - [EMPIRICAL INVESTIGATIONS TO PREDICT STOCK PRICE USING REGRESSION TO IMPROVE THE TRENDS OF INFORMATION TECHNOLOGY](#)
 - <https://ieeexplore.ieee.org/abstract/document/10968512>
- Held advisory roles at companies like Redgate [Sudharshan Tumkunta - Redgate Ambassador](#).
- Sudharshan has been invited and accepted as Program Committee Member for [PyTorch Conference 2025](#).
- Sudharshan has been invited and accepted as Program Committee Member for IEEE CBMS 2025
- He has been invited to serve as a chairperson, organizing committee member, or keynote speaker at prestigious tech conferences like IEEE : ICMLAS, CML, ICAISS.
- Part of Podcast as an Invited Speaker for AI Product Management
- Sudharshan is part of prestigious technology entities like
 - Fellow at Raptors,
 - Fellow at IETE and
 - Senior in IEEE, US-RSE, IAENG etc. (Attached)
- His industry expertise has led to opportunities for journal reviews, book reviews, and participation as a speaker or member of technical program committees for international conferences. He has peer-reviewed over 60 scholarly articles at 13 international conferences and journals in Python, AI, ML, and related fields. He has served as a Technical Program Chair for two conferences, judged five Globee Awards, and participated as a judge for the Conrad and Neals Awards, as well as reviewed four books. At Meta, he has conducted multiple interviews.
- Over the past four years, Sudharshan has mentored and coached more than 10 senior, mid-level, and junior Meta employees on building long-term technical strategies.
- Sudharshan also volunteers as a mentor on ADPList, having conducted over 56 mentorship sessions and Mentored 1600 minutes. His mentorship areas include Python discussions, AI/ML support, and guidance for system design. Sudharshan has received 100% positive reviews, consistently praised for being motivational, constructive, technically competent, and an excellent problem solver. These contributions earned him the certification of Top 1% Mentor for Feb 2025 from ADPList, and recognition in the top 50 multiple times.

Attached all the reference material here:

https://drive.google.com/drive/folders/1dDm5AQ3ARixpHkf8b69ymgjAs12J2xt0?usp=drive_link

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