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# AINA

MAGAZINE  
AI AND ANALYTICS

MEET  
**JOSH STARMER**  
The founder of "Statquest"

## URBAN ANALYTICS

How AI can help in creating smart cities of the future

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## SYNTHETIC DATA

Artificially generated data to train the next generation of AI models

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## PRIVACY IN ML

Techniques to preserve privacy while maintaining model performance

# References

## Towards Artificial Intelligence: Recent Developments and Potential Risks

- <https://blogs.windows.com/windowsdeveloper/2023/05/23/bringing-the-power-of-ai-to-windows-11-unlocking-a-new-era-of-productivity-for-customers-and-developers-with-windows-copilot-and-dev-home/>
- <https://www.adept.ai/>
- <https://openai.com/customer-stories/be-my-eyes>
- <https://www.prnewswire.com/news-releases/humanoid-robot-market-worth-17-3-billion-by-2027--exclusive-report-by-marketsandmarkets-301520783.html>
- <https://indianexpress.com/article/technology/artificial-intelligence/openai-backed-robotics-firm-1x-deploys-the-worlds-first-ai-robot-eve-8626164/>
- <https://ai.googleblog.com/2023/03/palm-e-embodied-multimodal-language.html>
- <https://www.prnewswire.com/news-releases/humanoid-robot-market-worth-17-3-billion-by-2027--exclusive-report-by-marketsandmarkets-301520783.html>
- <https://www.theguardian.com/technology/2022/sep/30/tesla-optimus-humanoid-robot-elon-musk-ai-day>
- <https://synchron.com/>
- <https://neuralink.com/>
- <https://blogs.scientificamerican.com/observations/dont-fear-the-terminator/>
- <https://indiaai.gov.in/article/andrew-ng-and-yann-lecun-on-why-ai-research-shouldn-t-be-paused>
- <https://www.gatesnotes.com/The-Age-of-AI-Has-Begun>
- <https://www.deepmind.com/blog/an-early-warning-system-for-novel-ai-risks>
- <https://openai.com/blog/governance-of-superintelligence>
- <https://tech.hindustantimes.com/tech/news/chatgpt-openai-ceo-sam-altman-ai-watch-dog-71686068947296.html>
- Superintelligence: Paths, Dangers, Strategies - Nick Bostrom

## Image References

- [https://commons.wikimedia.org/wiki/File:The\\_Prime\\_Minister\\_meets\\_with\\_AI\\_developers.jpg](https://commons.wikimedia.org/wiki/File:The_Prime_Minister_meets_with_AI_developers.jpg) - Image used in societal impact section
- <https://pixabay.com/it/illustrations/cervello-mente-umano-umanoide-7412662/>
- <https://pexels.com> - Pavel Danilyuk
- <https://www.pexels.com/@pixabay/>
- [https://commons.wikimedia.org/wiki/File:Hand\\_off\\_\(52535927777\).jpg](https://commons.wikimedia.org/wiki/File:Hand_off_(52535927777).jpg)
- <https://futureoflife.org/open-letter/pause-giant-ai-experiments/>
- Midjourney

## Cities Hitched to Informatics ? : Urban Analytics

- <https://arxiv.org/abs/1706.05535>
- <https://arxiv.org/abs/2111.07489>
- <https://arxiv.org/abs/2012.14349>

## Image References

- <https://indianexpress.com/article/cities/bangalore/bengaluru-namma-metro-world-resources-institute-technical-advisors-7482932/>
- flickr.com - David Orban (Picnic)
- <https://www.wricitiesindia.org/content/data-led-urban-planning>

# References

---

- [https://unsplash.com/photos/PM\\_VwL2ypes](https://unsplash.com/photos/PM_VwL2ypes)
  - <https://unsplash.com/photos/csC6CfiYKF0>
  - <https://medium.com/geekculture/the-energy-transfer-problem-charging-electric-vehicles-ed-662c2a3cd6>
  - <https://m.facebook.com/sidewalklabs/events/>
  - <https://www.dezeen.com/2020/10/20/delve-sidewalk-labs-machine-learning-tool-cities/>
  - <https://uk.urbanest.com/journal/best-parks-east-london/>
- 

## Breaking Boundaries with Synthetic Data

- <https://blogs.nvidia.com/blog/2021/06/08/what-is-synthetic-data/>
- 

## Image References

- [https://commons.wikimedia.org/wiki/File:Float\\_Glass\\_Unloading.jpg](https://commons.wikimedia.org/wiki/File:Float_Glass_Unloading.jpg)
  - <https://www.pexels.com/photo/warehouse-with-concrete-floors-4483610/>
  - [https://www.researchgate.net/publication/351752306\\_Review\\_on\\_Generative\\_Adversarial\\_Networks\\_Focusing\\_on\\_Computer\\_Vision\\_and\\_Its\\_Applications](https://www.researchgate.net/publication/351752306_Review_on_Generative_Adversarial_Networks_Focusing_on_Computer_Vision_and_Its_Applications)
  - <https://pexels.com> : Matthias Groeneveld
  - <https://www.wallpaperflare.com/cube-mesh-abstract-big-data-and-data-mining-concept-with-copyspace-wallpaper-aecoc>
  - <https://elise-deux.medium.com/everything-that-happened-in-the-synthetic-data-space-in-2022-c5d6c-b5aaf06>
- 

## Privacy Preserving Techniques in ML

- <https://arxiv.org/pdf/2004.12108.pdf>
  - <https://arxiv.org/pdf/2008.03686.pdf>
  - <https://arxiv.org/abs/2304.03442>
- 

## Image References

- [www.freepik.com](http://www.freepik.com)
  - [www.pixabay.com](http://www.pixabay.com)
- 

## The Creative Renaissance: How LLMs are shaping generative AI

- <https://www.nvidia.com/en-us/glossary/data-science/generative-ai/>
- <https://finalboss.io/ai-in-music/>
- <https://docs.midjourney.com/>
- <https://www.google.com/search?q=musiclm+paper&sourceid=chrome&ie=UTF-8>
- Papers:
- <https://arxiv.org/pdf/2108.07258.pdf>
- <https://arxiv.org/pdf/2305.10403.pdf>
- <https://arxiv.org/pdf/2301.11325.pdf>

# References

## Image References

- <https://www.pexels.com/photo/laptop-office-working-internet-16094047/>
- <https://www.trustedreviews.com/explainer/what-is-google-palm-2-4325830>
- <https://playgroundai.com/post/cllc1tlez0j5cs601sos1ys3v>
- <https://playgroundai.com/post/cllmxk4t606hks6015zd1dzti>
- <https://commons.wikimedia.org/wiki/>
- <https://www.flickr.com/photos/CErixsson/> - concert

## Algorithms to Allies: Shaping the Future of Policing

- <https://www.criminallegalnews.org/news/2020/aug/15/problems-predictive-policing/>
- <https://techdetector.de/stories/predictive-policing>
- <https://www.brennancenter.org/our-work/research-reports/predictive-policing-explained>
- <https://d3.harvard.edu/platform-rectom/submission/using-machine-learning-for-crime-prediction/>
- <https://blogs.lse.ac.uk/humanrights/2021/04/16/predictive-policing-in-india-deterring-crime-or-discriminating-minorities/>
- <https://vce.usc.edu/volume-5-issue-3/pitfalls-of-predictive-policing-an-ethical-analysis/>
- <https://vidhilegalpolicy.in/blog/indias-tryst-with-predictive-policing/>
- <https://www.predpol.com/technology/>

## Image References

- [https://commons.wikimedia.org/wiki/File:Seal\\_of\\_the\\_Los\\_Angeles\\_Police\\_Department.png](https://commons.wikimedia.org/wiki/File:Seal_of_the_Los_Angeles_Police_Department.png)
- <https://www.theguardian.com/us-news/2021/nov/07/lapd-predictive-policing-surveillance-reform>
- [https://commons.wikimedia.org/wiki/File:High\\_Court\\_of\\_Telangana\\_in\\_Hyderabad04.jpg](https://commons.wikimedia.org/wiki/File:High_Court_of_Telangana_in_Hyderabad04.jpg)
- [https://commons.wikimedia.org/wiki/File:Hyderabad\\_city\\_police\\_logo.jpg](https://commons.wikimedia.org/wiki/File:Hyderabad_city_police_logo.jpg)
- <https://www.pexels.com/photo/judges-desk-with-gavel-and-scales-5669619/>
- <https://www.flickr.com/photos/michaelcoghlan/> - Michael Coghlan - South Australian Supreme Court

## Transformers

- <https://github.com/Significant-Gravitas/Auto-GPT>