

Trabalhos ADAm

António Câmara

Apresentação preliminar: 3/01/2021

Prazo de entrega: 31/01/2021

Formato:

5 páginas ancoradas em imagens incluindo:

- Formulação do problema e apresentação de soluções alternativas. Conceptualização de “data, logic and presentation layers”.
- Fontes dos dados para a “data layer”; algoritmos utilizados na “logic layers” ; e tecnologias usadas na “presentation layer”.
- Proposta para acções futuras.

Links estruturais:

[Story telling deck](#) a seguir na escrita e deck para a [apresentação dos trabalhos](#)

[Environmental data sources](#) and [sensors](#)

[Machine learning](#) and other [AI links](#). See also [Text analysis](#), [Generative AI](#), [AI and architecture](#)

[Augmented reality](#) and [virtual reality](#) decks

[Visualization](#)

[Back-of-the-envelope calculations](#)

Para acesso a outros documentos relevantes consultar [“site” da cadeira](#) ou [grupo no Facebook](#)

Tipologia de projectos e links sugeridos para cada projecto:

Regeneração de ecossistemas naturais

<https://regeneration.org/>

<https://qz.com/1792563/how-much-is-an-ecosystem-worth/>

<https://thewildclassroom.com/virtual-reality-biomes/>

1. Florestas boreais

<https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1002/ecs2.1488>

<https://www.enjoycreative.ca/project/its-what-we-do>

<https://www.europeanbestdestinations.com/destinations/eden/wild-taiga/>

<https://auroraboreal.com.br/voce-conhece-a-floresta-boreal/>

2. Calotes polares

<https://www.nationalgeographic.org/encyclopedia/ice-cap/>

<https://psmag.com/ideas/we-already-have-effective-ways-of-restoring-arctic-ice>

<https://www.bbc.com/future/article/20200923-could-geoengineering-save-the-arctic-sea-ice>

<https://news.microsoft.com/on-the-issues/2019/10/29/ai-melting-glaciers-algae/> . See also <https://www.dailymail.co.uk/sciencetech/article-9928807/British-Antarctic-Survey-builds-AI-predict-ice-loss.html>

3. Corais

<https://www.sierraclub.org/sierra/robots-rescue-great-barrier-reef>

<https://www.fastcompany.com/90240605/our-reefs-are-dying-what-if-we-3d-print-new-ones>

<https://www.theguardian.com/environment/the-coral-triangle/2018/aug/13/ai-identifies-heat-resistant-coral-reefs-in-indonesia>

<https://www.fisheries.noaa.gov/national/habitat-conservation/restoring-coral-reefs>

4. Abelhas

<https://www.newscientist.com/article/2120832-robotic-bee-could-help-pollinate-crops-as-real-bees-decline>

<https://www.renature.co/articles/how-regenerative-agriculture-can-recover-bee-populations/>

<https://www.fao.org/publications/card/en/c/CB5353EN/>

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794706/national-pollinator-strategy.pdf

https://about.google/intl/ALL_uk/stories/save-the-bees/

<https://hal.archives-ouvertes.fr/hal-01826153/document>

5. Lince ibérico

https://www.panda.org/discover/our_focus/wildlife_practice/profiles/mammals/iberian lynx/

<https://www.worldwildlife.org/stories/bringing-back-the-iberian-lynx>

<https://www.theguardian.com/environment/2020/oct/25/the-lynx-effect-iberian-cat-claws-its-way-back-from-brink-of-extinction>

<https://www.mdpi.com/2076-2615/11/2/547>

[https://research.bangor.ac.uk/portal/files/22766446/Ovenden et al final submission.pdf](https://research.bangor.ac.uk/portal/files/22766446/Ovenden_et_al_final_submission.pdf)

Avaliação e controlo de poluição

6. Chamusca- identificação de fontes e controlo da poluição atmosférica

<http://www.ccdr-lvt.pt/files/e6169a719462a5e075f0af3e99341903a283b478.pdf>

<https://www.accuweather.com/pt/pt/chamusca/275494/air-quality-index/275494>

<https://www.epa.gov/air-quality-management-process/managing-air-quality-control-strategies-achieve-air-pollution>

<https://ieeexplore.ieee.org/document/9074283>

<https://www.innovatorsmag.com/vr-reveals-extent-of-air-pollution/>

<https://yourstory.com/2020/08/artificial-intelligence-improve-air-quality/amp>

7. Poluição dos solos- abordagens para a identificação de depósitos ilegais de lixo

<https://www.texasdisposal.com/blog/land-pollution/>

<https://www.intechopen.com/chapters/46032>

<https://www.findaphd.com/phds/project/artificial-intelligence-monitoring-system-for-soil-contamination-based-on-laser-induced-breakdown-spectroscopy-libs/?p126978>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4344663/>

<https://www.newscientist.com/article/2198898-ai-could-monitor-farms-from-space-to-look-for-illegal-pollution/>

<https://actionguide.info/t/11/> (illegal pollution)

8. Ilhas de lixo- abordagens para a identificação das fontes causadoras

- <https://actionguide.info/t/11/> (illegal pollution)
- [https://www.theworldcounts.com/stories/garbage islands in the ocean](https://www.theworldcounts.com/stories/garbage_islands_in_the_ocean)
- <https://phys.org/news/2017-11-trash-islands-central-america-ocean.html>
- <https://news.microsoft.com/apac/features/artificial-intelligence-takes-on-ocean-trash-cleaning-up-the-worlds-beaches-with-the-help-of-data/>
9. Estuário do Tejo- abordagens para a identificação de descargas ilegais
- https://sniambgeoviewer.apambiente.pt/Geodocs/geoportaldocs/Planos/PGR_H5-TEJO/RelatorioTecnico_CE%5C1_PGRHTEjo_Rel_CE.pdf
- <https://actionguide.info/t/11/> (illegal pollution)
- <https://www.intechopen.com/chapters/64603>
- https://www.youtube.com/watch?v=AhiS_5ZNbL0
- <https://charlottenc.gov/StormWater/SurfaceWaterQuality/Pages/IllegalDischarges.aspx>
10. Visualização de emissões de veículos e seus impactos na poluição atmosférica urbana
- <https://blog.tensorflow.org/2019/02/air-cognizer-predicting-air-quality.html>
- <https://www.marktechpost.com/2021/11/28/ericsson-and-uppsala-university-team-up-to-research-air-quality-prediction-using-machine-learning-and-federated-learning>
- https://3u3d.edpsciences.org/articles/3u3d/pdf/2012/01/3u3d_02002.pdf
- <https://www.facebook.com/download/279907917302049/digital%20twins%20and%20environmental%20modelling.pdf>
11. Minimização do lixo indiferenciado via aumento da reciclagem
- <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.465.94&rep=rep1&type=pdf>
- <https://spectrum.ieee.org/ai-proves-trash-sorter-extraordinaire>
- <https://www.ai-startups.org/top/wastesorting/>
- <https://towardsdatascience.com/how-to-build-an-image-classifier-for-waste-sorting-6d11d3c9c478>
- <https://quercus.pt/2021/03/03/wasteapp/>

Intervenções urbanas

12. Silos da Trafaria

<https://pt.slideshare.net/danielprado/storytelling-para-realidade-virtual-essa-mquina-de-empatia>

<https://revistacargo.pt/silopor-diminui-pegada-ecologica-ao-instalar-1650-paineis-solares-fotovoltaicos-na-trafaria/>

<https://www.youtube.com/watch?v=rpzHfZms5bQ>

https://www.iucn.org/sites/dev/files/import/downloads/commonlandpublicationv1lr_269496814.pdf

13. Desenvolvimento de espaços subterrâneos

<https://www.weforum.org/agenda/2018/05/finland-has-just-given-itself-a-100th-birthday-present-a-library>

<https://medium.com/descripter/10-cities-by-going-deep-a26d8023e087>

<https://www.fastcompany.com/90679810/the-case-for-building-cities-underground-2>

<https://www.nytimes.com/2021/11/01/travel/soviet-era-metros.html>

<https://www.fastcompany.com/90675130/this-underwater-bike-parking-garage-is-also-a-habitat-for-aquatic-life>

14. “Marketplaces” para a alimentação saudável juntando produtores e consumidores

<https://stories.platformdesigntoolkit.com/emerging-platforms-and-trends-in-the-context-of-the-drural-project-f9b83bc14f9b>

<https://www.mercycorpsagrifin.org/2021/09/28/introducing-the-digital-marketplace-playbook/>

<https://uia-initiative.eu/en/news/online-local-food-and-product-marketplace>

<https://www.nycfoodpolicy.org/onerare-the-cyber-worlds-introduction-to-a-food-metaverse/>

“Wearables”

15. Fato permitindo “water harvesting”

<https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/water-harvesting>

https://www.researchgate.net/publication/341307089_Super-hygroscopic_film_for_wearables_with_dual_functions_of_expediting_sweat_evaporation_and_energy_harvesting

<https://onlinelibrary.wiley.com/doi/abs/10.1002/aenm.201701243>

<https://www.wearabletechnologyinsights.com/articles/25170/sweat-collecting-patch-inspired-by-cactus-spines>