CV

Leonardo Blanger

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professional experience

Google Taiwan Engineering Limited, Taipei, Taiwan

- Software Engineer, February 2022 to now.
- Working on the Pixel Phone Project, since the Pixel 7 series (2022).
- Most of the work is centered on the low level touch processing algorithms and drivers software stack.
- Worked on the Android Operating System codebase.
- Work involves designing, revieweing, and maintaining complex systems and algorithms, often requiring Signal Processing and Machine Learning components, and requiring low level knowledge of Linux/Android OS components.
- Helped launch and maintain touch functionality on all regular Google Pixel Phones since 2022 (Pixel 7, 8, and 9 series), as well as the Pixel Tablet and Pixel Folds.

NeuralMind Artificial Intelligence, Campinas, Brazil

- Data Scientist, December 2020 to October 2021.
- Worked with Machine Learning for document recognition.
- Worked on training and deploying Machine Learning based Computer Vision systems for document authenticity verification products.

education

University of Sao Paulo, Brazil - Institute of Mathematics and Statistics

- MSc in Computer Science. March 2018 to October 2020.
- Supervisor: Prof. Dr^{a} Nina S. T. Hirata.
- Sao Paulo Research Foundation Scholarship.
- Focused on Machine Learning applied to Computer Vision.
- Worked with Deep Learning for Object Detection and GAN based image generation.
- **Dissertation project:** Managed to achived good Object Detection results (in Average Precision), using significantly less labeled data, by designing a sample synthesis pretraining initialization strategy.

Integrated Regional University, Erechim, Brazil

- BSc in Computer Science. 2013 to 2017.
- Academic Merit, class of 2017. Average score of 9.08 / 10.
- Special focus on Algorithms and Data Structures design and analysis.
- Engaged on the ACM-ICPC programming competitions. Won the sub-regionals and reached the national finals three times.

general skills

Main

- Touch Screen low level algorithms and drivers.
- Machine Learning for Computer Vision. Strong experience in Object Detection.
- Algorithms and Data Structures design and analysis.
- Deep Learning techniques in general.

Minor Skills

- Linux Programming Interface
- Linux Kernel Modules for driver development
- Statistics.
- Natural Language Processing
- Generative Image Models

technical skills

- **Programming Languages:** C/C++, Python (good understanding), Java (basic understanding)
- **Frameworks:** Tensorflow, Pytorch, scikit-learn, huggingface transformers, opencv, and overall ML ecosystem (pandas, matplotlib, numpy, ...)
- **Additional:** Object Oriented system design, Linux programming interface, Linux kernel and out-of-tree module development, Bash shell scripting, git, dvc.

additional experiences

Westfälische Wilhelms-Universität Münster, Germany

- Research Internship. October 2019 to March 2020.
- Supervisor: Prof. Dr. Xiaoyi Jiang
- Worked with GAN based sample synthesis for Object Detection.

University of Sao Paulo, Brazil – Institute of Mathematics and Statistics

- Tutoring for the Algorithm Analysis course (MAC5711). August 2018 to November 2018.
- Tutoring for the Introduction to Machine Learning course (MAC0460). March 2019 to July 2019.

open source projects

- `detr_tensorflow` – Tensorflow port from the original Pytorch implementation of the paper *End-to-End Object Detection with Transformers*
- `RefineDet_tensorflow` – Tensorflow implementation of the RefineDet architecture. Managed to replicate the paper's results.

(both on Github)

publications

Leonardo Blanger, Nina S. T. Hirata, Xiaoyi Jiang. "**Reducing the need for bounding box annotations in Object Detection using Image Classification data**". SIBGRAPI 2021 - Conference on Graphics, Patterns and Images. Brazil, 2021. (*accepted for publication*)

Leonardo Blanger, Nina S. T. Hirata. "**An Evaluation of Deep Learning Techniques for Qr Code Detection**". 2019 IEEE International Conference on Image Processing (ICIP). IEEE, 2019.

Leonardo Blanger, Valmir Junior, Clair J. Jevinski, Alison R. Panisson, Rafael H. Bordini. "**Improving the Performance of Taxi Service Applications using Multi-Agent Systems Techniques**". 2017 Meeting on Artificial and Computational Intelligence (ENIAC). Brazil, 2017.

achievements

- **Current.** Codeforces rating: 2138 (Master), max. rating: 2138 (Master).
- **2017.** 23th place – ACM ICPC programming contest, Latin American regional/Brazilian national finals.
- **2016.** 2nd place – Tecnomate Libres 2016 programming contest, UTN Santa Fe, Argentina.
- **2016.** 18th place – ACM ICPC programming contest, Latin American regional/Brazilian national finals.
- **2015.** 24th place – ACM ICPC programming contest, Latin American regional/Brazilian national finals.

languages

- **English** (fluent)
- **Portuguese** (native)

relevant books that i read

- **Linux Kernel Development** – Robert Love
- **Linux Kernel Programming - Second Edition** – Kaiwan N Billimoria
- **The Linux Programming Interface: A Linux and UNIX System Programming Handbook** – Michael Kerrisk
- **Design Patterns: Elements of Reusable Object-Oriented Software** – Erich Gamma
- **Hands-On Machine Learning with Scikit-Learn and TensorFlow** – Aurélien Geron
- **Learning from Data** – Yaser Abu-Mostafa, Malik Magdon-Ismail, Hsuan-Tien Lin
- **Reinforcement Learning, an Introduction** (2nd ed) – Richard S. Sutton, Andrew G. Barto
- **The Algorithm Design Manual** – Steven S. Skiena
- **OpenIntro Statistics** – Christopher Barr, David M. Diez, and Mine Çetinkaya-Rundel

relevant links

- **Contact e-mail:** leonardoblanger@gmail.com
- **Personal webpage:** https://leonardo-blanger.github.io
- **Linkedin:** https://www.linkedin.com/in/leonardo-blanger
- **Github:** https://github.com/Leonardo-Blanger
- **Codeforces profile:** https://codeforces.com/profile/Leonardo_Blanger
- **Up-to-date version of this CV:** https://leonardo-blanger.github.io/leoblanger_cv.pdf