Francisco Tobar

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SKILLS

Coding
C/C++ • Python • Ruby • R • Bash • Git • SQL • JavaScript • PHP • HTML5
Libraries/Frameworks
TensorFlow • PyTorch • Scikit-learn • Pandas • Ruby on Rails • Django
IT Operations
GNU/Linux • Apache • Nginx • PostgreSQL • MariaDB
Languages
Spanish • Native
English • Intermediate (TOEIC-2018 Level B2)

RELEVANT EXPERIENCE

Universidad Técnica Federico Santa María, Valparaíso, Chile - *Research Assistant*
Mar 2018 - Present
- Research, development, and testing of an alternative convolutional layer model in PyTorch to improve the performance by reducing the memory usage of generative adversarial networks (GANs) and image classification networks without affecting the quality of the outcome.
- Experimental results show a memory usage reduction in GANs of up to 40% when compared with the original convolutional layers.

Dlogistic, Valparaíso, Chile - *Freelance Software Development*
Mar 2018 - Jun 2018
- Developed and deployed a RoR web application for the assignment of packages to a delivery vehicle fleet using smartphones as barcode scanners.
- Reduced the daily package assignment process time from 2-3 hrs to under 30 min.

U-Planner, Valparaíso, Chile - *Data Science Internship*
Jan 2018 - Mar 2018
- Developed a machine learning algorithm using Python with scikit-learn for course enrollment prediction in educational institutions. Provided a competitive and quicker option to the previous forecast algorithm.

GeoInnova, Santiago, Chile - *Data Science Internship*
Jan 2017 - Mar 2017
- Implemented a quick K-neighbours algorithm for high dimensional data using C++.
- Designed and implemented an efficient pipeline between Cuda DLLs and Electron.js Framework.

PUBLICATIONS

"Multi-OctConv: Reducing Memory Requirements in Image Generative Adversarial Networks"- **Francisco Tobar** and Claudio Torres. *2020 39th International Conference of the Chilean Computer Science Society (SCCC). IEEE, 2020.*

EDUCATION

Mar 2018 - Present	**Msc. in Computer Science Engineering** Specialization: Scientific Computing and Computational Intelligence *Universidad Técnica Federico Santa María, Valparaíso, Chile*
Mar 2013 - Aug 2019	**Bsc. in Computer Science Engineering** *Universidad Técnica Federico Santa María, Valparaíso, Chile*