CRISTOBAL EYZAGUIRRE

Computer Science M.Sc.Eng. Student

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RESEARCH EXPERIENCE

AI Researcher
AI Lab - Pontifical Catholic University of Chile (PUC)

📅 July 2017 – Ongoing   ⚲ Santiago, Chile

- **Ongoing (ACL2021):** Greatly reduced computation on BERT type models while improving explainability by using adaptive algorithms.
- Explored effects of using class superset priors in semi-supervised image classification learning by propagating gradients through DAGs.
- **Publication (CVPR2020):** Proposed alternative algorithm for Adaptive Computation Time on recurrent models for Visual Reasoning and analyzed performance and transparency advantages.
- Researched (and validated) diverse strategies for auxiliary tasks and their benefits for Action Recognition in videos.
- Collaboration with Stanford. Proposed NLP model used to build a dataset with annotations for supervising visual attentions in VQA.

PROJECTS

Open Source Contributions

- (Work in Progress) Only implementation of Neural State Machine.
- PyTorch implementation of Memory, Attention and Composition (MAC) Network capable of 99% accuracy on CLEVR dataset.
- Only working full implementation of Adaptive Computation Time for Recurrent Neural Networks using PyTorch.
- Invented and coded a new visualization tool for multi-label geographic data (see Percentage Gridmap).

Iris.cl

- Led, coordinated and managed a team of 10 programmers (computer science students) during 4 months in building scalable platform with both mobile and web (SPA) frontends.
- Responsibilities included negotiating with the client, supporting both backend and frontend teams, planning and deployment.

TuPUC.cl

- Developed application (web + native Windows and MacOS) to generate and rank intelligent schedule suggestion which achieved over a thousand users less than a week after deployment.

TEACHING EXPERIENCE

- Teaching Assistant: Artificial Intelligence 2019-2020.
- Teaching Assistant: Deep Learning 2020.
- Coach and Product Manager for Capstone Project 2019 (ABET certified, two semesters 13 and 10 students respectively).
- Teacher: Diploma course in Artificial Intelligence PUC (2020).

WORK EXPERIENCE

Google Research Internship
Computer Vision

📅 Oct. 2020 – Ongoing   ⚲ Mountain View, CA

Improving models for video understanding.

Zippedi Research Internship
Computer Vision and Navigation

📅 Jan. – March 2020   ⚲ Santiago, Chile

- Implementation of computer vision algorithms for the automatic recognition of products in store shelves.
- Models run locally on embedded devices, or on cloud GPU instances.

EDUCATION

Master of Engineering in Computer Science
AI Lab - Pontifical Catholic University of Chile (PUC)

📅 July 2019 – Ongoing   ⚲ Santiago, Chile

Supervisor: Álvaro Soto, PhD. CMU.

- Emphasis on Machine Reasoning, Meta Learning and Adaptive Computation.

Bachelor of Engineering in Computer Science
Pontifical Catholic University of Chile

📅 2015 – 2019   ⚲ Santiago, Chile

- Minor in Data Science, graduated with distinction.

SKILLS

Programming Languages

Proficient/expert in Python, C, C++, JavaScript.

ML Tools, Packages and Resources

Proficient with PyTorch, NumPy, SKLearn. Comfortable with Tensorflow, Keras, Spacy, NLTK, Flume and Slurm.