

# CRISTOBAL EYZAGUIRRE

Computer Science M.Sc.Eng. Student

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📍 Santiago, Chile

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## RESEARCH EXPERIENCE

AI Researcher

AI Lab - Pontifical Catholic University of Chile (PUC)

📅 July 2017 – Ongoing

📍 Santiago, Chile

- Collaboration with Stanford. Proposed NLP model used to build a dataset with annotations for supervising visual attentions in VQA.
- Researched (and validated) diverse strategies for auxiliary tasks and their benefits for Action Recognition in videos.
- **Publication (CVPR2020):** Proposed alternative algorithm for Adaptive Computation Time on recurrent models for Visual Reasoning and analyzed performance and transparency advantages.
- Explored effects of inserting class superset priors for image classification on ImageNet.
- **Preprint (ICLR2021):** Greatly reduced computation on BERT type models while improving explainability by using adaptive algorithms.

## PROJECTS

Open Source Contributions

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

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

Zippedi Research Internship

Computer Vision and Navigation

📅 January-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.

Google Research Internship

Computer Vision

📅 Ongoing

📍 Mountain View, CA

## 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, JavaScript. Comfortable with R, Ruby, PHP.

ML Tools, Packages and Resources

Proficient with PyTorch, NumPy, SKLearn. Comfortable with Tensorflow, Keras, Spacy, NLTK. Prior experience with Hadoop, Flume, Spark/SparkML.