Israfel Salazar

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EDUCATION

ENS-PARIS-SACLAY
MSc Mathematics, Vision and Learning (MVA)
Oct 2022 - Present

UNIVERSITY PARIS-SACLAY
MSc Electrical Engineering, Machine Vision and AI
Jun 2020 - Jun 2022
Cum. Grade: 15.4/20 (GPA 3.7)
Best student of the major

UNIVERSITY OF CHILE
Mechanical Engineer (Engineering Diploma)
Completed Jun 2018
Cum. Grade: 6.2/7.0 (GPA 3.7)
Years of studies: 6

COURSEWORK

Probability and Statistics
Linear Algebra
Convex Optimization
Algorithms and Data Structures
Computational Statistics
Information Theory
3D Computer Vision
Reinforcement Learning
Advanced Learning for Text and Graphs
Image and Video Processing
CS232N CNNs for Visual Recognition

SKILLS

PROGRAMMING
Advanced:
Python • Pytorch • Pandas • Scikit-Learn
HuggingFace • GIT
Intermediate:
Tensorflow • SQL • Java • C++
Familiar:
R • ROS • CSS/HTML • VHDL • THREE.js

LANGUAGE
Spanish: Native
English: Fluent (C2)
French: Excellent command (C1)

OTHER HOBBIES

Running
Playing the guitar
Animal cognition and behaviour enthusiast
Human civilization history

EXPERIENCE

HUGGING FACE | Predoctoral Fatima Fellowship
June 2022 – Present
- Research project under the guidance of @Douwe Kiela and @Amanpreet Singh.
- Implemented pipeline to augment unimodal datasets to be multimodal (Python).
- Trained multimodal models to measure the impact of multiple modalities in the end performance, and the quality of generative models.

INRIA | Research Intern @Statify team
April 2022 – October 2022 | Grenoble, France
- Experimented with Bayesian Generative Deep Learning architectures for estimating the viability of a genome in certain environment (Python).
- Implemented Conditional Variational Autoencoders for generation of genomic data.
- Improved by 10% the accuracy of predicting the survival of species, compared to statistical methods.

COPENHAGEN UNIVERSITY | Research Intern @Coastal
Oct 2021 – March 2022 | Copenhagen, Denmark
- Worked with Prof. Anders Søgaard and a team of PhD students on handwritten recognition of Danish registries (Python).
- Led the experiments on multi-task learning to leverage external datasets and tasks.
- Incremented accuracy by 2% by exhaustively comparing label encoding options.

EXCELERATE | Software Engineering Intern
Jul 2021 – Sept 2021 | Copenhagen, Denmark
- Designed and implemented a pipeline that fetched descriptions of university courses and summarized them (code).
- Developed a web scrapper to obtain the course descriptions.
- Designed and implemented the database to store the different university courses.
- Integrated a pre-trained language model based on the transformer architecture to summarize the coursework experience of a student.

MUNDOS VIRTUALES | Robotics Engineer
Apr 2018 – Nov 2019 | Santiago, Chile
- Designed, prototyped, and manufactured robotics components and machines.
- Developed scripts for robotic arms involving decision and integration.
- Researched and manufactured state-of-the-art soft robotics for handling objects.
- Created a dataset to fine-tune a YOLO architecture to detect ripe fruits.
- Simulated and modeled robotic arms using 3D environments to harvest the fruit.

OTHER PROJECTS

Vehicle re-Identification using Deep Domain Adaptation
- Implemented unsupervised learning algorithm based on optimal transport to jointly learn the distribution of different datasets.(GitHub)

Failure detection using Vibration Modes and CNNs (Engineering Thesis)
- Implemented and compared different mathematical methods for failure detection based on the vibration modes of the material.
- Showed that CNNs trained for semantic segmentation obtain comparable results.

Associations in the University of Chile
- Led teams to organise scientific events and faculty projects that involved coordinating around 100 people to host more than 15K visitors.
- Led organization of the university job fair, bringing together more than 60 enterprises and 4000 engineering students.

AWARDS

2022	Fellow	Fatima Predoctoral Fellowship
2020	Fellow	MIT Santander Scholarship: Leading Digital Transformation
2018	Honors	Graduated with the highest academic distinction
2015-2018	Honors	Dean's list
2011	Honors	High School Academic Excellence