NOELIA DE LA CRUZ

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5160 Rue Rivard, Montreal, QC, H2J 2P1

Software developer, NLP & AI enthusiast, with excellent programming skills, a love of knowledge and an interest in the development of new processes and ideas.

EDUCATION

The University of Edinburgh **Edinburgh, United Kingdom**
Master of Science, Speech and Language Processing, 2020-2021

McGill University **Montreal, QC, Canada**
Bachelor of Science, Joint Honours Computer Science and Physics ad-hoc, 2014-2018
- Distinction, First Class Honours, GPA: 3.83/4

Gymnasium Ohmoor **Hamburg, Germany**
School exchange year, 2013-2014

École Paul-Le Jeune **St-Tite, QC, Canada**
School exchange year, 2011-2012

Colegio Babeque Secundaria **Santo Domingo, Dominican Rep.**
High School Diploma, 2007-2013
- 94/100. Awarded "Babeque por Excelencia": highest recognition given by the school at graduation

EXPERIENCE

wrnch AI **Montreal, QC**
Developer *October 2018 – September 2020*
- Developed cloud infrastructure for wrnch's computer vision software using docker, Kubernetes and GCP
- Designed and created a flask (python) REST API to access said software, integrated it with a RoR website
- Developed python-based tools and infrastructure for the annotation of our computer vision training dataset

McGill University, School of Computer Science **Montreal, QC**
Research Assistant *May - July 2018*
- Worked on Common Sense Reasoning in Natural Language Processing
- Developed a python-based Knowledge Hunting algorithm to tackle the Winograd Schema Challenge

TU Dresden, Biological Algorithms Group **Dresden, Germany**
Summer Research Intern *May – August 2017*
- Worked on theoretical models for Sperm Chemokinesis
- Simulated the hydrodynamic swimming of sperm subject to chemokinetic steering feedback using python

McGill University, McGill Space Institute **Montreal, QC**
Student Research Assistant *May 2016 - April 2017*
- Developed python scripts for the analysis of Chandra X-Ray data on Sgr A* (Supermassive Black Hole)
- Presented our research at the Canadian Space Exploration Workshop (CSEW), November 2016

McGill University **Montreal, QC**
Floor Fellow (Resident Assistant) *August 2015 – April 2018*
- Cared for residents' physical and mental health through academic and personal counselling
- Created a harmonious living environment through conflict mediation and resolution

PUBLICATIONS

- Emami, A., de la Cruz, N., et al., *A Knowledge Hunting Framework for Common Sense Reasoning*, 2018, *EMNLP*
- Haggard, D., Nynka, M., Mon, B., de la Cruz, N., et al., *Chandra Spectral and Timing Analysis of Sgr A*'s Brightest X-ray Flares*, 2019, *The Astrophysical Journal*

- Kromer, J., de la Cruz, N., Friedrich, B. F., *Chemokinetic search with one bit of memory, 2019*, (arXiv:1904.11020)

PROJECTS

Find the "Largest" Digit, *McGill University, Winter 2018*

- In-class Kaggle competition, tried several ML algorithms (CNN, neural network implemented from scratch, kernelized SVM) to identify the one hand-written digit, amongst three, with the largest area in an image
- Obtained a test accuracy of 94% with the CNN (using PyTorch and OpenCV) on a dataset of 10k images

Sentiment Analysis, *McGill University, Fall 2017*

- Classified the sentiment of movie reviews using logistic regression, linear SVM and Naive Bayes
- Obtained a test accuracy of 79.4% with Naive Bayes (using scikit-learn and nltk) on a data set of 2k reviews

SCHOLARSHIPS & AWARDS

- DAAD Rise Germany Internship, MITACS Scholarship, 2017
- Science Undergraduate Research Award (SURA), 2016 (Physics) and 2017 (Computer Science)
- Faculty of Science Scholarship, 2015-2016
- McGill Entrance Scholarship, 2014
- MESCyT International Scholarship, 2014-2018

LANGUAGES

Natural: *Fluent* - Spanish, English, French, German; *Intermediate* - Portuguese, Italian
Programming: Python, C++, Ruby, C