

# Gustavo Aguilar

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## EDUCATION

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### Ph.D. in Computer Science

University of Houston

Research: Natural Language Processing, Advisor: Dr. Thamar Solorio

GPA: 3.89 / 4.0

Aug 2016 - May 2021 (Expected)

Houston, TX

### Bachelor of Science in Computer Science

Universidad Centroamericana José Simeón Cañas

Thesis: VR Algorithm Using Kinect Camera for Amputees Undergoing Rehabilitation

GPA: 8.31 / 10.0 — Top 3 in class of 2015

Mar 2010 - Oct 2015

La Libertad - El Salvador

## EXPERIENCE

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### Research Assistant

University of Houston at [RiTUAL lab](#), Dr. Thamar Solorio

- Named entity recognition on user-generated text with deep learning
- English-Spanish code-switching on social media data

Sep 2016 - Present

Houston, TX

### Applied Machine Learning Scientist (Intern)

Amazon, Alexa Speech, Dr. Chao Wang

- Conducted research on emotion recognition and multimodal data

May 2018 - Aug 2018

Cambridge, MA

### Teaching Assistant

Introduction to Natural Language Processing (COSC 6336), Dr. Thamar Solorio

- Elaborated and graded in-class assignments, homework and practical exams
- Held weekly office hours and covered lectures when needed

Jan 2018 - May 2018

Houston, TX

### Game Developer

Beyond Games Inc.

- Programmed in different areas of game development (Gameplay, Graphics and AI)
- Co-led a team of 14 engineers (and reviewed the team's code)
- Presented updates of the team's progress to senior management

Nov 2013 - Jul 2016

San Salvador, El Salvador

### Programmer

Avianca Airlines

- Developed an ETL software for Avianca's subsidiaries
- Modified peripheral applications to work with Oracle Enterprise Business Suite (EBS)

Feb 2013 - Oct 2013

La Libertad, El Salvador

## TECHNICAL SKILLS

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### Programming Languages

Python, C#, C/C++, F#, Java, Elixir, PLT Scheme, Prolog

### Web Programming

JavaScript, NodeJS, ReactJS, HTML/CSS, PHP, Web Socket, RestWS

### Database Engines

MongoDB, Oracle, MySQL, PostgreSQL, SQL Server

### Computer Networking

Network Topologies, Switch and Router Configuration

### Libraries

Scikit-learn, NLTK, Reactive Programming (Rx), OpenGL

### Deep Learning Libraries

PyTorch, Keras, TensorFlow

### Other skills

Git, SVN, Unity3D

## HONORS AND AWARDS

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- Recipient of the [2019 Snap Inc. Research Fellowship](#)
- Recipient of the [Facebook Scholarship for the Udacity Deep Learning Nanodegree](#) (PyTorch)
- Scholarship to attend the CRA Grad Cohort Workshop for URMD, 2019
- [Best Junior Ph.D. Student Award](#) granted by the Computer Science department of the Univ. of Houston, 2018
- Univ. of Houston Alumni Association (UHAA) and Natural Sciences and Mathematics (NSM) Scholarship, 2018
- First place on [Noisy User-generated Text \(W-NUT\) shared task](#) at EMNLP 2017
- Dean's List, 2010-2014, Universidad Centroamericana José Simeón Cañas (UCA)
- Absolute chess champion of El Salvador in 2012
- Governmental award for sporting excellence in chess, El Salvador 2008
- Absolute U20 chess champion of El Salvador at the age of 15, 2007
- Central American & Caribbean U14 and U16 chess champion, 2006-2008
- Chess coach at UCA, 2011-2013

## RESEARCH ACTIVITIES AND SERVICES

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- Speaker at [Data Science El Salvador](#) community, December 2018.
- Speaker at the [Computer Science Focus on Research \(FOR\)](#) seminars at the Univ. of Houston, Fall 2018
- Co-organizer of the third workshop on [Computational Approaches to Linguistic Code-Switching \(CALCS\)](#), collocated with ACL 2018 (Melbourne, AU). Leading the shared task on Named Entity Recognition on English-Spanish code-switched data.

## PUBLICATIONS

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- **Gustavo Aguilar**, Fahad AlGhamdi, Victor Soto, Mona Diab, Julia Hirschberg and Thamar Solorio. [Named Entity Recognition on Code-switched Data: Overview of the CALCS 2018 Shared Task](#). In *Proceedings of the Third Workshop on Computational Approaches to Linguistic Code-Switching*, ACL 2018. Melbourne, Australia.
- **Gustavo Aguilar**, A. Pastor López Monroy, Fabio A. González and Thamar Solorio. [Modeling Noisiness to Recognize Named Entities using Multitask Neural Networks on Social Media](#). In *The 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics*, NAACL 2018. New Orleans, Louisiana.
- **Gustavo Aguilar**, Suraj Maharjan, A. Pastor López Monroy, and Thamar Solorio. [A Multi-task Approach for Named Entity Recognition on Social Media Data](#). In *Proceedings of the 3rd Workshop on Noisy User-generated Text*, EMNLP 2017. Copenhagen, Denmark — **1st place in the evaluation categories**.
- **Gustavo Aguilar**, Oscar Dueñas, and Guillermo Cortés (advisor). [Diseño de Algoritmo para Rehabilitación Virtual basado en la Cámara Kinect](#) (Virtual Reality Algorithm Using Kinect Camera for Amputees Undergoing Rehabilitation), 2015 — short article based on my bachelor's thesis.

## OTHER

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- English and Spanish speaker
- Professional chess player for 12 years