Enrique Noriega-Atala

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Education

Ph.D. Information Science, The University of Arizona (Winter 2019).
- Minor: Statistics

M.S. Computer Science, The University of Arizona (2014).

B.S. Information Technologies, Monterrey Institute of Technology and Higher Education (2010).

Research Interests

Machine Learning, Reinforcement Learning, Natural Language Processing, Artificial Intelligence, Statistics.

Experience

2013 - present Graduate Research Associate, The University of Arizona (UA)

Worked within CLU lab and ML4AI on multiple Natural Language Processing (NLP) and Machine Learning projects applied to the health sciences.

The focus of my contributions has been on the areas of Information Extraction, Information Retrieval and Reinforcement Learning and has lead to multiple publications in top-tier peer-reviews venues.

During my graduate work, I've been a regular contributor to REACH, a machine reading system for biomedical publications.

2013 - present Teaching Assistant, UA. Courses:

Assisted with grading, office hours, substitute teaching and lab sessions for the following courses:

- Computer Organization (2013)
- Data Structures (2014)
- Information Retrieval and Web Search (2015, 2016)
- Introduction to Machine Learning (2017, 2019)

2012 - 2019 Software Development and DevOps Consulting, FlexBPO

Lead the migration of multiple enterprise information systems into Microsoft's Azure cloud from their previous on-premises location. Designed and coordinated the migration of software assets and data, as well as worked on software adaptations to make the systems work properly on their new cloud-based home.

Participated on the design and architecture of multiple information systems based on the .NET stack.

2010 - 2012 Sr Software Developer, FSC

Worked on the development of an ERP system and multiple ancillary products for the produce industry based on the .NET stack.

2009 - 2010 Software Developer, Teknol, SA de CV

Worked on GIS systems for multitouch hardware for the mining industry.

2008 - 2009 Internship at Centro de Investigación y Desarrollo de Ingeniería Avanzada, AC

Web developer working with Python and Django-based projects.

2007 - 2008 Web Developer, Optima Commerce LLC

Contributed in the development of web-based international trade information system based on ASP.NET.

2007 Jr. Developer, Marketing Movil S.A de C.V

Contributed in the development of a Java-based service for sending and transmitting text messages (SMS) for a local marketing agency.

Honors and Awards

UA Graduate & Professional Student's Council Travel Grant (2018).

UA School of Information's Travel Award (2018).

International Conference in Data Mining Student Award (2018).

Galileo Circle Scholar, UA's College of Science (2014).

Instituto Educativo Sonora-Arizona scholarship (2013-2014).

CONACyT graduate studies scholarship (2012-2014).

CENEVAL's outstanding performance testimony on the EGEL test (2010).

Presentations and Publications

Journal Publications

Enrique Noriega-Atala, Paul D. Hein, Shraddha S. Thumsi, Zechy Wong, Xia Wang, Sean M. Hendryx, Clayton T. Morrison
Extracting Inter-sentence Relations for Associating Biological Context with Events in Biomedical Text. *IEEE/ACM transactions on computational biology and bioinformatics. 2019.*

Marco A. Valenzuela-Escárcega, Özgün Babur, Gus Hahn-Powell, Dane Bell, Thomas Hicks, **Enrique Noriega-Atala**, Xia Wang, Mihai Surdeanu, Emek Demir, Clayton T. Morrison.
Large-scale Automated Machine Reading Discovers New Cancer Driving Mechanisms. *Database: The Journal of Biological Databases and Curation. 2018.*

Conference Publications

Enrique Noriega-Atala, Marco A. Valenzuela-Escárcega, Clayton T. Morrison and Mihai Surdeanu. Learning what to read: Focused machine reading. *Proceedings of the Conference on Empirical Methods in Natural Language Processing* (EMNLP), 2017.

Workshop Publications

Enrique Noriega-Atala, Marco A. Valenzuela-Escáarcega, Clayton T. Morrison and Mihai Surdeanu. Focused Reading: Reinforcement Learning for What Documents to Read. *Proceedings of the Interactive Machine Learning and Semantic Information Retrieval Workshop at ICML, 2017.*

Marco A. Valenzuela-Escárcega, Özgün Babur, Gus Hahn-Powell, Dane Bell, Thomas Hicks, **Enrique Noriega-Atala**, Xia Wang, Mihai Surdeanu, Emek Demir, Clayton T. Morrison.
Large-scale Automated Reading with Reach Discovers New Cancer Driving Mechanisms. *Proceedings of the BioCreative VI Workshop* (BioCreative6 2017), 2017, pp. 200-202.

Enrique Noriega-Atala, Paul D. Hein, Shraddha S. Thumsi, Zechy Wong, Xia Wang, Clayton T. Morrison.
Inter-sentence Relation Extraction for Associating Biological Context with Events in Biomedical Texts. *Proceedings of the Sixth Workshop on Data Mining in Biomedical Informatics and Healthcare at ICDM, 2018.*

Enrique Noriega-Atala, Zhengzhong Liang, John A. Bachman, Clayton T. Morrison, Mihai Surdeanu. Understanding the Polarity of Events in the Biomedical Literature: Deep Learning vs. Linguistically-informed Methods. *Proceedings of the Workshop on extracting structured knowledge from scientific publications at NAACL-HLT, 2019.* (In Press)

Conference Presentations

Learning what to read: Focused machine reading. *NLP Applications track, EMNLP*, Copenhagen, Denmark (2017).

Grounding Gradable Adjectives through Crowd-sourcing *Language Resources and Evaluation Conference*, Miyazaki, Japan (2018).

Inter-sentence Relation Extraction for Associating Biological Context with Events in Biomedical Text. *Sixth Workshop on Data Mining in Biomedical Informatics and Healthcare at ICDM*, Singapore (2018).

Inter-sentence Relation Extraction for Associating Biological Context with Events in Biomedical Text. *Sixth Workshop on Data Mining in Biomedical Informatics and Healthcare at ICDM*, Singapore (2018).

Understanding the Polarity of Events in the Biomedical Literature: Deep Learning vs. Linguistically-informed Methods. *Workshop on extracting structured knowledge from scientific publications at NAACL-HLT*, Minneapolis, Minnesota (2019).

Guest Lectures

What is Machine Learning?. For the course *Knowledge-based Systems in the Organizations. Systems and Industrial Engineering program*. Monterrey Institute of Technology and Higher Education, Hermosillo, México (2015).

Service

Student volunteer at NAACL-HLT. Minneapolis, Minnesota (2019).

Skills

Programming Languages:

Python, Scala, Java, C#, C, C++, R, Matlab, JavaScript, VB.NET.

Scientific Tooling:

PyTorch, DyNET, Scikit-Learn, NumPy, SciPy, Matplotlib, CoreNLP, REACH.

Databases

Relational: SQL Server, Postgres. MySQL. NoSQL: Redis, Neo4J.

IDEs

IntelliJ, PyCharm, Visual Studio, Netbeans.

CI/CD

Travis CI, Maven, SBT, Makefiles.

Cloud

AWS: Compute. Azure: AppServices, VMs, Service Bus, Storage, Networking.

Systems administration

Unix-like environment proficiency. Bash scripting.

Open Source Software

SARSAmora: A Reinforcement Learning library for Scala (`https://github.com/ml4ai/SARSAmora`)

Last updated: October 24, 2019