


# Panos Karagiannis


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## Education

- **University of California – Santa Cruz (UCSC)** Santa Cruz, CA  
*Master of Science, Computer Science; GPA: 3.8* Sept. 2016 – Dec. 2017
  - Thesis: End-to-End Natural Language Generation using LSTM-based Neural Networks
  - Advisor: Marilyn Walker
  - Key Courses: Machine Learning, Advanced Topics in Machine Learning, Algorithms, Data Mining
  - Teaching assistant for Introduction to Analysis of Algorithms
- **University of California – Los Angeles (UCLA)** Los Angeles, CA  
*Bachelor of Science, Mathematics of Computation* Sept. 2012 – June 2016

## Experience

- **Moveo.AI** United States  
*CEO and Co-founder* August 2020 – Current
  - Working to create the next generation of Virtual Assistant powered by GPT technologies
  - 8x growth year over year
  - More than 3 million monthly active users in than 85 countries and 19 languages
  - Raised multiple funding rounds
- **IBM** Boston, MA  
*Deep Learning and Cognitive Analytics* March 2018 – June 2020
  - Part of the *AI Innovations and Research* team around Watson
  - Developed novel state of the art spell correction algorithm 
    - \* Patent accepted
    - \* IBM Innovation Award across all *Data and AI Organization*
  - Productized spell correction algorithm and integrated gRPC micro service into the existing production environment of Watson Assistant cloud platform
  - Scalability and productization of NLP algorithms
  - Enable GA features within Watson Assistant
  - DevOps experience using tools such as Ghenkins, Docker, Kubernetes
  - Manager’s choice award
  - Top 1% performer equity award (across all IBM)
- **University of California, Santa Cruz** Santa Cruz, CA  
*Deep Learning Research for NLP* March 2017 – Dec. 2017
  - Part of the research team that explores attention based sequence to sequence neural models in natural language generation.
    - \* Attentional neural natural language generation
    - \* Sequence to Sequence models
    - \* Search algorithms to generate output sequences
    - \* NAACL publication accepted
    - \* Frameworks: TensorFlow, Pandas, Scikit-learn, NumPy

## Publications

**A Deep Ensemble Model with Slot Alignment for Sequence-to-Sequence NLG** ☞ : Proceedings of NAACL 2018

## Notable Academic Projects

**End-to-End Natural Language Generation using LSTM-based Neural Networks** ☞ : Deep learning project developed as my master thesis but also for submission to the E2E NLG Challenge. The project utilizes neural networks to learn from unaligned data in order to jointly perform sentence planning and surface realizations. It uses an Encoder – Decoder architecture for sequence to sequence modeling.

**Comparing Bayesian and LSTM Networks in Natural Language Generation** ☞ : Class research project focused on comparing a graphical and a deep learning approach in order to produce utterances given meaning representations in the restaurant domain.

**Yelp Restaurant Recommendation System** ☞ : Machine learning class project that predicts whether a user will like or dislike a previously unvisited restaurant using the SVD algorithm.

**Data Mining Projects** ☞ : Machine learning solutions to real world problems by combining Prediction ☞ , Classification ☞ , Clustering and Association Analysis ☞ models. These projects involve the full machine learning pipeline from data retrieval and data cleansing to model creation and evaluation.

**Smaller Projects** : Artificial Intelligence Solver for Sokoban ☞ , Linear Regression ☞ , Linear Bayesian Regression ☞ , Naive Bayes classification ☞ , SVM classification ☞ , Machine Learning Spam Filters ☞ , KenKen Puzzle Solver ☞ .

## Technical Skills and Expertise

**Programming Languages:** Python (expert), Java (proficient), C++ (proficient), Scala (proficient), Common Lisp (prior experience), Scheme (prior experience), Prolog (prior experience), SQL (prior experience), Ocaml (prior experience), R (prior experience)

**Machine Learning Tools** : TensorFlow, Keras, Scikit-learn, Pandas, NumPy, NLTK

**Operating Systems:** Unix, Linux, Windows, macOS

**Languages:** English (Fluent), Greek (Native language), Italian (Intermediate), French (Intermediate)