Daniel Bis

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Education

Doctor of Philosophy in Computer Science	**August 2019 – Present**
Florida State University, Tallahassee, FL	GPA: 4.0
Bachelor of Arts in Computer Science	**May 2019**
Florida State University, Tallahassee, FL	CS GPA: 3.75
	GPA: 3.57

Technical Skills

Programming Languages: **Python, C++, C, JavaScript, SQL**
Frameworks: **PyTorch**, **TensorFlow, Keras**, **NumPy, Pandas, Flask, Express**
Databases: **PostgreSQL, ElasticSearch, MongoDB**

Experience

Data Scientist, Risk Management Solutions   **May 2020 – Present**
- Contributes to the development of products for real-time event preparation and response, post-event hazard, and loss assessments.
- Exposed to large-scale, real-time data streams, and hazard probability analytics.

Research Assistant, Florida State University   **May 2018 – Present**
- Member of Natural Language Processing and Deep Learning groups. Studies fundamental questions related to enabling machines to become more adept at human language.
- Currently focused on self-supervised representation learning, word sense disambiguation, text summarization, and analysis of representations learned by language models.
- Worked on projects related to interpretable bioinformatics.

NLP/Software Engineer Intern, Samsung R&D Institute Poland   **June 2019 – August 2019**
- Developed new features and services for the next-generation dialogue systems.
- Used C++/Java/Python to implement state of the art Machine Learning and NLP algorithms.
- Worked with a large amount of data, using both relational and non-relational database systems.

Teaching Assistant, Florida State University   **September 2017 – May 2019**
- Responsible for helping students understand the material covered in Object Oriented Programming (C++) and Computer Fluency courses.

Peer-Reviewed Conference Papers

1. *Podkorytov M., Bis D., Cai J., Amirizirtol K. , Liu X., Effects of Architecture and Training on Embedding Geometry and Feature Discriminability in BERT,*
   The 2020 International Joint Conference on Neural Networks
2. Payrovnaziri, N,. Barrett, L., Bis, He, Z. *Enhancing Prediction Models for One-Year Mortality in Patients with Acute Myocardial Infraction and Post Myocardial Infraction Syndrome*,
   MEDINFO 2019, the 17th World Congress on Medical and Health Informatics
3. Zhang C., Liu X., Bis D., *An Analysis on the Learning Rules of the Skip-Gram Model*,
   The 2019 International Joint Conference on Neural Networks
4. Bis, D., Zhang, C., Liu, X., He, Z. *Layered Multistep Bidirectional Long Short-Term Memory Networks for Biomedical Word Sense Disambiguation*,
   The 2018 IEEE International Conference on Bioinformatics and Biomedicine,

Peer-Reviewed Journal Papers

1. Zhang C., Bis D., Liu X., Zhe H., *Biomedical Word Sense Disambiguation with Bidirectional Long Short-Term Memory and Attention-based Neural Networks,*
BMC Bioinformatics (20), 2019

Talks

1. Bis, D., Liu, X., *DARTS: Dependency Aware Reinforced Text Summarization using Tree-Structured LSTM Encoder with Multilevel Attention.*

Other Projects

Storm-Risk
- A mathematical model created in Python (NumPy), simulates the damage from hurricane force winds based on the house characteristics. Mobile and web version implemented using Flask.

BookIt
- Web application that enables easy appointment scheduling. Implemented using Flask and SQL database.

T$hirt
- Recommendation system, finds the most similar images to the image provided by a user.
- Image features are extracted from the last pooling layer of Inception v3 neural network architecture and clustered using K-Means clustering algorithm.

Chatbot
- Built using Facebook Messenger API, NodeJS, MongoDB, hosted on Heroku. Takes an order for a restaurant.

Bash Shell
- Implemented with C, including features like piping, background processing and I/O redirection.

Elevator Kernel
- Linux Kernel Module representing an elevator. Supports concurrency using multi-threading and synchronization techniques.

Awards

• 2nd Award, Poster Contest, Florida State University CS Expo	**November 2018**
• Florida-Eastern European Linkage Scholarship Recipient	**August 2016 – May 2019**
• Nancy Casper Hillis and Mark Hillis Undergraduate Research Grant	**May 2018**
• ACC Academic Honor Roll	**2016 – 2017, 2017-2018**

Extracurricular Activities

• Florida State University Varsity Men's Swim Team	**August 2016 – May 2019**
• Polish Swimming National Team Member and National Championship Medalist	
• French Open Championship runner-up in swimming	