Matías **Grioni**

SOFTWARE ENGINEER · FOCUSED ON ML & NLP

Seattle, WA

330-998-1645 | matgrioni@gmail.com | matgrioni.github.io | matgrioni | matgrioni

Work Experience

Microsoft *Seattle, Washington*
SOFTWARE ENGINEER *March 2020 - Present*

- Software engineer for Ranking Platform on IndexServe team in Bing and Project Brainwave which supports ML hardware acceleration on FPGAs.
- Worked heavily on reengineering Ranking Platform, with significant experience in service scaling, stability, and system design.
- Improved traffic management algorithms between services for outlier detection and handling, request clustering to reduce bandwidth costs, and consistent hashing algorithm to bring more load stability, uniformity, and improve peak operational capacity.
- Created tool for detecting memory corruption issues, such as double free, buffer overrun, use after free, to help track down concurrency bugs with extra diagnostic information.
- Developed custom solution for distributed tracing to gain more insight into request execution, and fine tune service operation by surfacing valuable and actionable trace information inline in responses.
- Added forking traffic feature within Brainwave services to enable and create CI pipeline to enable quicker validation and release times.

Microsoft *Seattle, Washington*
SOFTWARE ENGINEER *June 2018 - March 2020*

- Software engineer for Hardware Lab Kit, a test harness for the Windows device ecosystem enabling device and driver certification and bring up.
- Simplified end user experience for test authors and customers through simplified test authoring and C# and Powershell tools.
- Improved devops processes through creation of test monitoring and reporting tool, automated log mining, and a 30% improvement in install time.
- Use of Kusto and telemetry to understand and improve test behavior, reliabilty and run times. Identified build service with reliability issues responsible for 8% of failures and identified alternatives and increased robustness of dependency.
- Brought in a fresh perspective advocating for more CI tools, separation of internal tools from central Windows build, and functional coding techniques.

Quid, Inc. *San Francisco, California*
SOFTWARE ENGINEER INTERN *June 2017 - August 2017*

- Investigated integration of news dataset into existing data acquisition pipeline.
- Use of Apache Spark and Kafka for parallel data processing and news article deduplication.
- Created ElasticSearch clients in Python for automated batch processing of sentiment analysis and Named Entity Recognition (NER).
- Benchmarking system for JavaScript physics engine and porting to Java service on backend.

The Ohio State University *Columbus, Ohio*
UNDERGRADUATE RESEARCHER UNDER MARIE-CATHERINE DE MARNEFFE *September 2016 - May 2018*

- Improved consistency of Universal Dependencies corpora by implementing and building on research in On Detecting Errors in Dependency Treebanks.
- Created pipeline for sentiment analysis of Shakespeare plays using Folger's digital texts and Stanford CoreNLP tools.
- Implementing active learning approach in Latin NER system based on Perseus project, TreeTagger, and William Whitaker's words.
- Publication and poster presentation at DepLing 2017, Assessing the Annotation Consistency of the Universal Dependencies Corpora.

Education

The Ohio State University *Columbus, Ohio*
B.S. IN COMPUTER SCIENCE AND ENGINEERING *August 2014 - May 2018*

- Minors in Mathematics and Linguistics
- GPA: 3.985

Projects

pyconll A minimal, all Python library to interface with CoNLL-U files, used for dependency treebanks and in linguistic research.
Albert: The Euchre AI Evaluation of Monte Carlo tree search on a non-deterministic, imperfect information card game.
jiloj Microservices combining topic classification, Spaced Repetition, and trivia for an optimized Jeopardy! training regimen.

Skills

Programming Languages C#, C/C++, Python, Java (Professional Experience); Javascript, Go, Scala (project experience)
Technologies MSVC, .NET, SQL (Professional); Spark, Kafka, Elasticsearch (project experience)
Human Languages English, Spanish (native); Italian, French, Esperanto (conversational)