Paul Nguyen

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TECHNICAL SKILLS

- **Primary Languages**: Python, CommonLISP, SPARQL, PostgreSQL, Javascript, D3JS
- **Secondary Languages**: C/C++, ReactJS, Bash, MSSQLServer, HTML, CSS
- **Tools**: Pytorch, Pandas, Matplotlib, D3JS, NumPy, SciPy, Scikit-Learn, NetworkX, JIRA, Jenkins, SVN, Git

INDUSTRY EXPERIENCE

Anaconda Austin, TX
Open Source Software Engineer (Metagraph Team) *Feb 2020—Present*

- Design & build system for efficiently translating between different graph data representations for optimal performance on various hardware backends.
- Investigate & implement deep graph representation learning methods, e.g. GraphSAGE & node2vec.
- Implement, maintain, and test graph algorithms, e.g. PageRank & Louvain clustering, on both CPU and GPU.
- Primary tools included Python, Pytorch, CuGraph, CuDF, Pandas, SciPy, Javascript, and JupyterLab.

Cycorp Austin, TX
Lead Data Integration Engineer & Semantic Inference Engine Developer *Feb 2017—Feb 2020*

- Independently rebuilt 20-year-old legacy compiler to translate from our declarative formal reasoning/ontology language to optimized SQL & SPARQL for client data integration.
- Collaborated primarily with ontologists to extend code features and vocabulary of our symbolic logic language used for querying our knowledge graph with over 20 million semantic representations.
- Built framework for integrating HTTP web services into our declarative logic language to enable secure integration with proprietary client data.
- Extended theorem prover to execute work distributed over multiple machines for 18-24x speedup.
- Developed a deep-learning NLP model for word-sense disambiguation in PyTorch to be used in our open information extraction pipeline.
- Managed and mentored 3 data team members.
- Primary tools included Python, LISP, Pytorch, Bash, Jenkins, JIRA, test-driven development, and Scrum.

University of Virginia Charlottesville, VA
Graduate Researcher

- Designed domain-specific language for image processing program analysis and optimization.
- Implemented as a source-to-source compiler from Python to C/C++.
- Published in ACM Transaction on Graphics and presented at ACM SIGGRAPH.

SIDE PROJECTS

Anime Recommender System Method Comparison | PyTorch, Optuna, D3JS Github Repo | Results

- Implemented & evaluated neural network and matrix factorization recommender systems for anime.

Google Play Review Sentiment Analysis | PyTorch, Transformers, Pandas, D3.JS Github Repo | Results

- Evaluate 15 pre-trained transformers models (e.g. XLNet, DistilBERT) on classifying app reviews.

EDUCATION

University of Virginia Charlottesville, VA
Master of Computer Science
Thesis: Image Perforation, Automatically Accelerating Image Pipelines by Intelligently Skipping Samples

Washington & Lee University Lexington, VA
B.S. Computer Science
B.A. Mathematics