

Dan Zheng

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EDUCATION

PURDUE UNIVERSITY

BS in Computer Science

College of Science

May 2018 | West Lafayette, IN

Cum. GPA: 3.81 | CS GPA: 4.0

Tracks

Machine Intelligence

LINKS

Github:// dan-zheng

LinkedIn:// dan-zheng

SKILLS

PROGRAMMING

Swift • C/C++ • Python • Scala

Kotlin • Java • Perl • JS

MACHINE LEARNING

TensorFlow • PyTorch

NLP (coref, text classification)

Data Augmentation (audio, text)

ASR (CTC decoding, KenLM)

OTHER

Bash/Zsh • Docker • Git

HTML/CSS • MongoDB • Regex

SQL • Vim • L^AT_EX

LEADERSHIP

CS 190 - CS TOOLS

Teaching Assistant

Fall 2016 - Spring 2017

Taught CS freshman to use UNIX

commands and Git

IGNITE THE FLAME

Peer Mentor

Fall 2016

Guided CS freshman with creating

full-stack web app

COURSEWORK

Data Structures & Algorithms

Software Engineering

Systems Programming

Competitive Programming

Intro to Artificial Intelligence

Compilers: Principles & Practice

Data Mining & Machine Learning

EXPERIENCE

THE DLVM PROJECT (DLVM.ORG) | Key Contributor

Summer 2017 – Present

Research Project: Compiler Infrastructure for Deep Learning Systems

- **DLVM:**
 - Implemented key general-purpose and domain-specific optimization passes on DLVM's SSA linear algebra IR
 - Set up testing infrastructure using LLVM Integrated Tester and FileCheck
- **CoreTensor:** a tensor library featuring shaping, storage, indexing, slicing, linear algebra shape transformation, and collection behavior
- **NNKit:** a tagless-final neural network DSL embedded in Swift focusing on type safety and developer experience

DIGITAL REASONING | NLP/Deep Learning Intern

May 2017 - Aug 2017 | Nashville, TN

- Created Turby, a library providing data augmentation for text to improve performance of NLP/ML models
- Improved Japanese ASR model with custom CTC scorer implementation
- Built character-level and phrase-based Japanese language models for use with ASR model

PURDUE UNIVERSITY | JavaScript/Perl Programmer

Oct 2015 – May 2017 | West Lafayette, IN

- Worked with Purdue physics and math departments to create interactive data visualizations and dynamic problems

PROJECTS

TURBY | Creator

Summer 2017

Python Library

- Created and Dockerized library providing data augmentation for text using diverse strategies (spelling, near words, coreference, dependency)
- Tested Turby with fasttext/PyTorch models and measured improvements in precision and recall

LMUTILS | Creator

Summer 2017

Python Library

- Created and Dockerized collection of tools for building n-gram language models with KenLM, usable via CLI or Python API
- Added support for multiple languages (English, Japanese, Spanish)

MEETCHU | Co-Creator

Spring 2017

Full-stack Web Application

- Co-created Meetchu, a real-time messaging and meeting app for study groups written with Node.js/Express, MySQL, Socket.io, Vue.js

TRAVELSMART | Creator, Purdue Black IronHack Winner

Fall 2016

Web Application (Hackathon)

- Created travel app based on risk of viral infection
- **Best Solution Winner in the Purdue University 2016 Black IronHack**