Ziqi (Alan) Dong

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EDUCATION

Northeastern University, Shenyang, China Oct. 2015 - present

B.S. in Software Engineering

- GPA: **3.79/4.5**, Rank: **4/59**

Nanyang Technological University, Singapore Feb. 2018

Short-term exchange program

PUBLICATIONS

[1] Shengzhe Xu, **Ziqi Dong**, Na Meng, Meditor: Semantics-Based Generation and Application of API Migration Edits, Programming Language Design and Implementation, (Under review).

[2] Chaohe Zhang, Dancheng Li, Hongfa Wu, Chunyan Han, **Ziqi Dong**, Hailong Li, Chen Ding, A Prediction Method of MicroRNA Based on TensorFlow Framework, 2017 CHINESE NATIONAL CONFERENCE on COMPUTERS APPLICATION (NCCA 2017).

EXPERIENCES

Virginia Tech, Blacksburg, VA, U.S.A. Sept.2018 - Nov.2018

Research Intern, Advisor: Dr. Na Meng

- Designed a semantics-based mining algorithm that learns the code patterns from library migrations and implemented a tool that generates the java code during migrations of library APIs. Achieved coverage of four popular libraries (Lucene, Bukkit, Android and CommonIO) with>95% accuracy.
- Responsible for implementing the machine learning algorithm that mines open source repositories for migration-related (MR) commits, and a semantic analysis that conducts interprocedural analysis on changed Java files to locate and cluster MR code changes.
- Evaluated the effectiveness of manual testing, monkey testing, and stochastic model-based (Stoat) testing by counting the event-logs emitted by Android APK. Results indicate that Stoat testing performs the best in terms of lifecycle events and is able to mimic human behaviors for certain apps.

NEUSoft Inc., Shenyang, China June2018 - Sept.2018

Software Engineering Internship

- Developed the beta-version of an end-to-end smart logistic system that takes operational commands from mobile applications and communicates with the core database for further business operations.
- Responsible for implementing the initial framework for the logistic system using Qt, designing the management flow of the data warehouse and end-testing. Adopted the test-driving approach during the development and contributed to >1,000 lines of testing code to the code base.
- Implemented a deep-learning model using OpenCV and Caffe that is capable of recognizing vehicle plates at the highway entrance to achieve automatic payment. Achieved 95%-97% accuracy in Neusoft Enterprise Database.

Northeastern University, Shenyang, China Mar.2017 - June 2017

Research Assistant, Advisor: Prof. Dancheng Li

- A neural network model is proposed to predict human pre-miRNA and is implemented in TensorFlow. The result achieves >90% accuracy which is better than most of the human pre-miRNA predicting algorithm.
- Responsible for data retrieval and pre-processing the raw RNA sequence data; conducted comprehensive parameter tuning process in a semi-automatic manner.

HONORS AND AWARDS

Meritorious Winner, American College Students Mathematical Modeling Contest 2018

Academic Outstanding Individual, Northeastern University 2018

Second-class Scholarship, Northeastern University 2017, 2018

SKILLS

Programming Languages: C, C++, Python, Java, HTML, JavaScript, PHP, XML, CSS, QML

Software: PyCharm, Eclipse, SQL Server, IntelliJ IDEA, CLion, Qt

Framework: TensorFlow, OpenCV, Spring, Vue