YANG NIE

Tel: 86-13808063509 | Mail: yn6@njit.edu
11-4-304 Fancaodi, No.1 Tongzilin Middle Road, Wuhou district, Chengdu City, Sichuan Province, China

OBJECTIVE

A highly-motivated, organized and dedicated PhD candidate with a solid background in mathematics and software to seek for admission into a new Ph.D. Program in Computer Science in the area of Artificial Intelligence

RESEARCH INTERESTS & RESEARCH BACKGROUND

I am now doing research in the field of computer vision. Action recognition / classification is my main research direction, along with image segmentation and augmentation. My research is about inventing and generalizing deep computer vision algorithms to phenomenons of Astrophysics. I've collaborated with a group of Astrophysicists and our research is funded by NASA. In addition, I have also got the experience of generative models (GANs) and Reinforcement Learning. During my study as an Ms student, I also conducted research in natural language processing (NLP) about duplicate detection and sentiment analysis.

I also have a solid background of math. I have learned multiple mathematics, such as Probability Theory and Stochastic Process, Discrete Mathematics, and Modern Mathematics other than basic ones like Calculus and Linear Algebra.

As a senior software engineer, I am fluent in mainstream program languages such as Python, Java and C/C++. As a project manager, I have participated and managed several important scientific projects worth over millions. As an architect, I have successfully delivered two systems involving both software and hardware.

PHD STUDY IN NEW JERSEY INSTITUTE OF TECHNOLOGY

I have learned CS610 Data Structure & Algorithm, CS611 Computability & Complex, CS659 Image Processing and CS634 Data Mining. I have passed the qualifying exam which included all the curriculums I mentioned about at the end of 2021 Spring.

EDUCATION BACKGROUND

New Jersey Institute of Technology Sep.2020-Present
PhD Candidate in Computer and Information Science **GPA**: 3.83/4.0

The University of Tokushima Oct.2009-Sep.2011
Master of Science in Systems Innovation Engineering **GPA**: 4.0/4.0

Awards: International Exchange Scholarship, Ministry of Culture of Japan

Beijing University of Posts and Telecommunications Sep.2008-Mar.2011
Master of Science in Signal and Information Processing

Beijing University of Posts and Telecommunications Sep.2002-Jun.2006
Bachelor of Science in Information and Computing Science

PUBLICATIONS

Yang Nie, Jason T.L. Wang, Elad Armar, Ohad Ben-Shahar. *DeepFilament: Action Recognition for solarFilament Eruption Type detection*. CVPR 2022 (in review)

Yasser Abduallah, Jason T. L. Wang, **Yang Nie**, Chang Liu, and Haimin Wang. *DeepSun: machine-learning-as-a-service for solar flare prediction*. Research in Astronomy and Astrophysics, 21(7):160, 2021.

Hai Wang, **Yang Nie**, *Compact Piecewise Linear Model Based Temperature Control of Multi-Core Systems Considering Leakage Power*, IEEE Transactions on Industrial Informatics, Dec. 2019

Yang Nie, *New Solution for Near-duplicated Documents Detection*, China Science and Technology, Jun. 2011

PATENT

Lei Li, **Yang Nie**, Qing Zhao, "*A Method for Detecting Text Repetition*", China. Patent CN102081598B, Jun 1st, 2011

PROFESSIONAL SKILLS

Computer Skills: Python, Java, C/C++, C#, Matlab

RESEARCH EXPERIENCE

Space Weather Prediction Mar.2020-Present

Advisor: Prof. Jason.T.L.Wang, New Jersey Institute of Technology

Project: *DeepFilament: Action Recognition for Filament Eruption Type Detection*

Proposed a new method to deal with videos with various lengths, implemented a two-stream 3D convolutional model to predict the eruption type of a solar filament video, and introduced multiple new techniques to boost the performance of the model.

Interdisciplinary Research on Chip Thermal Control Jan.2018 - Apr.2019

Advisor: Prof. Wang Hai, State Key Laboratory of Electronic Thin Films and Integrated Devices, University of Electronics Science and Technology of China

Project: *Compact Piecewise Linear Model Based Temperature Control of Multi-Core Systems Considering Leakage Power*

Assisted in carrying out the experiments and adjusting algorithm. Adjusted and implemented the PCA(Principal Component Analysis) algorithm in MOR（Model Order Reduction）process. Optimized the model.

WORK EXPERIENCES

Institute of High Energy Physics, Chinese Academy of Science Apr.2011-Oct.2013

Position: Software Engineer, Deputy Head of Software Group of HXMT Satellite Project

Designed and wrote the test system for onboard electrical devices of HXMT Satellite, focusing on data processing and data mining.

The 29th Research Institute of China Electronic Technology Corporation Oct.2013-May.2016

Position: System Engineer

As project manager and software engineer, carried out solutions for problems such as detecting specific signals in complicated environment, and responsible of the qualities of the products.

Chengdu UESTC Optical Communications Corporation Jun.2016-Sep.2017

Position: Director of Software Department

Designed the unmanned auto-test system which involved automatic control, action recognition and data mining. Led the software department.

Thunder Soft Oct.2017-Sep.2020

Position: Project Manage & Software Architect

Designed an auto-test system for In-Vehicle Information(IVI) of automobiles (General Motors).