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# SIDDHARTH VERMA

siddharth-verma.com

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#### **EDUCATION**

## Netaji Subhas Institute of Technology (NSIT), University of Delhi, India

2015 - 2019

- Bachelor of Engineering (B.E) in Computer Engineering. Aggregate: 77.0%
- Honors: First-class with Distinction, IEEE scholarship recipient

#### RESEARCH AND WORK EXPERIENCE

#### **Associate Software Engineer**

Expedia Group, Gurgaon, India

July 2019 - present

• Developing solutions for financial transactions on the e-commerce platform

#### **Research Assistant**

University of Pennsylvania, USA

December 2017 - present

<u>Co-evolving genetic-programming (GP) trees with rules in Learning Classifier Systems (LCS)</u>

- Developed Python code from scratch for imbedding GP-Trees in the ExSTraCS framework, a supervised LCS
- Enhanced the performance of GP tree operations in terms of execution speed and tree representation *GP Trees Python Library*
- Created a python library for all the GP trees related operations that can be used directly for any GP application Supervisor: **Dr. Ryan Urbanowicz**, Assistant Professor, Perelman School of Medicine, University of Pennsylvania

#### **Software Engineering Intern**

Expedia Group, Gurgaon, India

June 2018 - July 2018

### Stored Value Bank Adaptor

- Devised a framework to communicate with bank partners for making reward point transactions using ESB.
- Reduced time of on-boarding the adaptors from three months to three days.

#### **Research Assistant**

Netaji Subhas Institute of Technology, India

January 2017 - May 2018

Solving training issues in Generative Adversarial Networks (GANs)

• Research article under submission at a conference.

Evolving game playing strategies using eXtended Classifier Systems (XCS)

Proposed an approach of playing game of Othello using XCS, a branch of LCS.

Supervisor: Dr. Swati Aggarwal, Assistant Professor in Computer Engineering Department, NSIT

### **PUBLICATION**

S. Jain\*, **S. Verma**\*, S. Kumar\* and S. Aggarwal, "**An Evolutionary Learning Approach to Play Othello Using XCS**" *2018 IEEE Congress on Evolutionary Computation (CEC)*, Rio de Janeiro, Brazil, 2018, pp. 1-8. (WCCI 8-13 July, 2018) [\*equal contribution] doi: 10.1109/CEC.2018.8477644

## INTERNATIONAL CONFERENCE AND EXTRA CURRICULAR ACTIVITY

# Speaker World Congress of Computational Intelligence (WCCI), Rio De Janeiro, Brazil

8-9 July, 2018

• Talked about the research ideas on evolutionary algorithms and reinforcement learning at the conference.

#### **Summer School**

Indian Institute of Science (IISc), Bengaluru, India

July 2017

• Participated in the lectures by research professionals on latest research in artificial intelligence.

#### RELEVANT SKILLS

- Computer Languages: Java, Python, C++, Julia
- Libraries and Tools: TensorFlow, DEAP, Numpy, Spring, LaTeX,
- Technical Skills: Data Structures, Algorithms, Deep Learning, Reinforcement Learning, Genetic Programming