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SIDDHARTH VERMA

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EDUCATION

Netaji Subhas Institute of Technology (NSIT), University of Delhi, India **August 2015 - present**

- Bachelor of Engineering (B.E) in Computer Engineering. Aggregate: 77.0%
- Relevant Coursework: Operating Systems, Database Management, Data Structures, Computer Architecture, Discrete Mathematics and Algorithms.

RESEARCH AND WORK EXPERIENCE

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.
- Replaced the method of coding the adaptor with a drag & drop UI for making transactions.
- Reduced time of on-boarding the adaptors from three months to three days.

Research Intern **University of Pennsylvania, USA (Remote)** **December 2017 - present**

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

- 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 of Informatics, Perelman School of Medicine, University of Pennsylvania

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 British Machine Vision Conference 2019.

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**

- Presented two research articles at the conference.
- Received an $800 grant from IEEE being an undergraduate speaker and having a major contribution in the paper.

Summer School **Indian Institute of Science (IISc), Bengaluru, India** **July 2017**

- Participated in the lectures by the research professionals and industry experts on cutting-edge research work in artificial intelligence and key areas of computer science.

RELEVANT SKILLS

- **Computer Languages**: Java, Python, C++, Julia
- **Computer Libraries and Tools**: SciPy, scikit-learn, Pandas, DEAP, Numpy, Jupyter Notebook, Eclipse, LaTeX, Enterprise Service Bus (ESB), Mulesoft
- **Technical Skills**: Data Structures, Algorithms, Reinforcement Learning, Genetic Programming, Supervised Learning