|  |  |  |  |
| --- | --- | --- | --- |
| Siddharth Verma  [verma.siddharth1201@gmail.com](mailto:verma.siddharth1201@gmail.com) | [siddharth-verma.com](https://siddharth-verma.com/) | [github.com/siddharth-verma60](https://github.com/siddharth-verma60) | | | |
| Education | | | |
| **Netaji Subhas Institute of Technology (NSIT), University of Delhi, India** | *Aug 2015 – Jun 2019* | | |
| *Bachelor of Engineering (Honors) in Computer Engineering* |  | | |
| * **GPA:** 8.6/10 (78.19%) * **Honors:** First-class with Distinction, IEEE scholarship recipient for research in evolutionary computation * **Relevant coursework:** Calculus, Linear Algebra, Probability and Information theory, Theory of automata, Artificial intelligence, Operating systems, Database systems, Data Structure and algorithms, Networking systems | | | |
| Work and Research Experience | | | |
| **Expedia Group, Gurgaon, India** | | | |
| *Software Engineer – Loyalty Team* | *Jul 2019 – Present* | | |
| * **Led the migration** of micro-services and databases to the AWS cloud infrastructure. * **Designed and developed** the invoicing algorithm for business use cases involving points and cash refunds. * Developed a **blockchain based service** combining different loyalty programs and won2nd Prizein the hackathon. * **Mentored an undergrad intern** to integrate Datadog as Application performance tool with Loyalty platform. * Built RESTful web services in ***Java*** using***Spring Boot***web framework. | | | |
| *Software Engineer Intern* | *Jun 2018 – Jul 2018* | | |
| * Created an application that **reduced partner onboarding time by one-third** usingMuleSoft platform. | | | |
| **University of Pennsylvania, Philadelphia, USA** | *Dec 2017 – Dec 2019* | | |
| *Research Assistant, URBS lab – Perelman School of Medicine – Advisor:* *Dr. Ryan Urbanowicz* | | | |
| *‘Co-evolving genetic-programming (GP) trees in a rule-based learning framework’*   * Proposed a **problem-driven machine learning system** by integrating GP trees in an evolutionary rule-based LCS. * Created a **python library** to perform genetic programming operations in regression and classification problems. | | | |
| **Netaji Subhas Institute of Technology, New Delhi, India** | *Jan 2016 – May 2018* | | |
| *Research Assistant – Advisor:* *Dr. Swati Aggarwal* | | | |
| *‘Solving training issues in Generative Adversarial Networks (GANs)’*   * **Improved the cost function** of GAN by leveraging autoencoders using PyTorch library.   *‘Evolving game playing strategies using an evolutionary reinforcement learning technique’*   * Proposed an approach to **play Othello using LCS**, a reinforcement learning ML framework in ***Java***. | | | |
| Extra-Curricular Activities | | | |
| **Quoko – Positive news app:**  *Co-creator and Technical Head* | | *Jun 2020* | |
| * Created an app to enhance mental health of people through positive news cards during COVID-19 pandemic. * Viewed by **250k+people** across **39 countries** with **1k+ app** downloads. | | | |
| **Invited speaker:** *World Congress of Computational Intelligence (WCCI), Rio De Janeiro, Brazil* | | | *Jul 2018* |
| * Presented research papers on **evolutionary algorithms** and **reinforcement learning** at the conference. | | | |
| **Summer School:** *Indian Institute of Science (IISc), Bengaluru, India* | | | *Jul 2017* |
| * Selected in a **cohort of 77 students** from across the country to attend artificial intelligence lectures and workshops. | | | |
| Publications | | | |
| * **Verma, S.**, Borole, P. and Urbanowicz, R., 2020, July. Evolving genetic programming trees in a rule-based learning framework. Proceedings of the 2020 Genetic and Evolutionary Computation Conference Companion (pp. 233-234). * Nagpal, S., **Verma, S.**, Gupta, S. and Aggarwal, S., 2020, July. A Guided Learning Approach for Generative Adversarial Networks. In 2020 International Joint Conference on Neural Networks (IJCNN) (pp. 1-8). IEEE. * Jain, S., **Verma, S.**, Kumar, S. and Aggarwal, S., 2018, July. An evolutionary learning approach to play Othello using XCS. In 2018 IEEE Congress on Evolutionary Computation (CEC) (pp. 1-8). IEEE. | | | |
| Skills and Interests | | | |
| **Computer Languages**: Java and Python (Proficient), Bash, SQL, C++, Julia, LATEX  **Technical Skills**: Deep Learning, Evolutionary computation, Computer Vision, SQL, DynamoDB, MongoDB  **Industry Skills:** Spring framework, AWS services, Agile development, Scalable web development  **Online courses:** Deep learning specialization, AI for medical diagnosis- deeplearning.ai, Mathematics for ML- Coursera  **Interests:** French-harp player, Currency Connoisseur (collection from 50+ countries), Swimming (8+ years of training) | | | |