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AADESH

Skills: C/C++, Python, Julia, Unix/Linux, SQL, Shell Script, Verilog, Git.
Languages: English, Hindi, Marathi

EXPERIENCE

Julia Season of Contribution(JSoC) (language Julia) May 2019 - Aug 2019

(Code of Conduct same as Google Summer of Code)

- Implemented Range over-approximation algorithm which improves bounds over Range of Taylor Models By 70-95% using TaylorMode to Zonotope conversion.
- Developed RangeEnclosures.jl a Julia Package which bounds polynomials using various methods, which was initiated by my PR to TaylorModels.jl.
- Implemented Branch and Bound(BNB) and Linearly dominated Bound(LDB) algorithm. BNB can minimise relative precision up to 50% and achieve relative precision [1e-5, 1e-5] in most of the cases. Debugged porting validated_int to TMJets algorithm.
- Created Proof of Concept for Domain Contraction Methods using Interval Constraint Programming.

National Institute of Technology, Tiruchirappalli - Intern (Python, NLTK) Nov 2018 - Jan 2019

- Taught myself Python, Pandas, NLTK and sci-kit learn. (natural language processing)
- Implemented naive Bayes classification algorithm, over text news from different sources.
- Analysed data by plotting graphs using Ipython, cleaned data to feed in ML algorithms.

Personal project - Accelerating optimization via machine learning Mar 2019 - Apr 2019

- Implemented surrogate optimization algorithm with the help of regression using RBF.
- Parameter of ODEs can be predicted, In case of lotka volterra equation we found out that parameter is predicted with an accuracy of 80%.
- Surrogate match the actual ODE which can be visualized by graphs.

Leadership roles and scholastic achievement

- 7th in regional (Scholarship) HHS Exam among 20,000 student.
- Directed short film, managed a team of six fixed spots to shoot and workflow planning.
- Caption of High school Kabaddi team, bagged 2nd place in division level. (total teams 30)

EDUCATION

Indian Institute of Information and Technology, Tiruchirappalli July 2017 - May 2021

Computer Science and Engineering

CGPA - 7.75 (Current GPA - 8.09)

Key courses -
Software Engineering, Internetworking Protocols(Socket Programming C and Java), Database Management Systems(SQL, XML), Computer Architecture - Current Courses. Data structures(C\C++ Lab), Introduction to Algorithms(C\C++ Lab), Probability Theory, Principles of Operational Research, Operating Systems(Unix\Linux Lab), Data Communications and Networking - completed courses.

Sports - Swimmer, 2nd place in Volleyball at Prothymas(IIIT Sports events).
College clubs - Member of Genesis(Robotics club), developed robotic arm(2D) in group of three.
Member of Reel Club(Short film).

Narayana Junior College (High school)

Percentage - 94%