

KUMAR PRASUN

Jersey City, NJ • (551) 358-7381 • kumarprasun@nyu.edu • www.linkedin.com/in/kumar-prasun/
• <https://github.com/TestSubjector>

EDUCATION

- **New York University, Courant**, New York, NY Sept 2021-May 2023 (ongoing)
Master of Science, Computer Science
- **Birla Institute of Technology and Science - Pilani**, Hyderabad, India Aug 2015-May 2020
Master of Science, Mathematics
- **Birla Institute of Technology and Science - Pilani**, Hyderabad, India Aug 2016- May 2020
Bachelor of Engineering in Computer Science

EXPERIENCE

- **Junior Research Fellow, BITS Pilani**, Hyderabad, India December 2020 - June 2021
 - Developed high-performance CUDA and MPI enabled accelerated meshfree solvers for computational aerodynamic simulations.
 - The solvers were successfully able to process massive grids in the order of millions of points spread over multiple distributed systems.
 - Additionally, different versions were developed in multiple languages including C, Julia, Python & Fortran for performance analysis.
 - The computational efficiency and relative performance of the different languages was benchmarked and the results presented in NVIDIA's 2021 GTC Conference.
- **Google Summer of Code, OpenAstronomy**, Remote May 2017 - August 2017
 - Ported several astronomical routines from NASA's IDL Astronomy User's Library to that of AstroLib.jl, an open-source library for the Julia programming language.
 - Wrote several unit tests and worked on increasing the type stability & performance of the AstroLib.jl library.

RESEARCH

- Nischay Ram Mamidi, **Kumar Prasun**, Dhruv Saxena, Anil Nemili, Bharatkumar Sharma, S.M. Deshpande *On the performance of GPU accelerated q-LSKUM based meshfree solvers in Fortran, C++, Python, and Julia*. Under review, preprint at arXiv:2108.07031
- Rupanshu Soi, Nischay Ram Mamidi, Elliott Slaughter, **Kumar Prasun**, Anil Nemili, and S.M. Deshpande, *An Implicitly Parallel Meshfree Solver in Regent*. 2020 IEEE/ACM 3rd Annual Parallel Applications Workshop: Alternatives To MPI+X (PAW-ATM), Virtual Event, November 9 - 19, 2020

SKILLS

- Julia • Fortran 90 • C • Python • Bash • Git
- High Performance Computing • CUDA/GPU Programming • MPI
- Artificial Intelligence • Open-Source Development

AWARDS

- 2022 Finalist for MIT's BattleCode AI competition.
- Awarded Junior Research Fellowship by the Govt. of India
- Selected in Google Summer of Code 2017, with the Open Astronomy organisation..