Nikhil Kumar

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Education

Rutgers, The State University of New Jersey — Piscataway, NJ
Master of Science in Biomedical Engineering — Expected May 2017
Bachelor of Science in Biomedical Engineering, Minor: Computer Science — May 2016
Cumulative GPA: 3.77 / 4.0

- Engineering Honors Program, Dean's List (All Semesters), 5 year Biomedical Engineering B.S./M.S. Program

Skills

Programming: Java, Shell, C, Python, R, C#, Html, C++, JavaScript, CSS, LaTeX, Matlab, x86 Assembly
Environments: Windows, Linux, Gimp, Git, Excel, Word, PowerPoint, Amazon Web Services, OpenCV, SolidWorks
Relevant Graduate Coursework: Biosignal Processing, Introduction to Artificial Intelligence (Fall 2016)

Work Experience

Harvard-MIT Health Sciences and Technology — Cambridge, MA
Summer Intern — Summer 2016

- Developed an optimized algorithm for processing 2D genomic data that reduced processing time and storage space by 50% and 35% respectively.
- Used methods such as parallelization, vectorization, and run-length encoding

Merck & Co., Inc. — Rahway, NJ
Intern - Future Leaders Program — Summer 2015

- Developed a scientific data platform using Python on Amazon Web Services with scalable and customizable components.
- Implemented a publication recommendation tool on the platform using machine learning and PubMed.

Human Genetics Institute of New Jersey — Piscataway, NJ
Computational Research — Spring 2013 – Fall 2014

- Analyzed nucleosome stability on Chip-Seq data resulting in published work.
- Computed expression profile clustering on Rna-Seq data.

Research

Computational Analysis of Gene Expression in Stem Cells — Piscataway, NJ
Team Leader - Senior Design — September 2015 - May 2016

- Lead and organized a team to conduct computational analysis on gene expression.
- Designed and tested algorithms to retrieve Chip-Seq differential expression.

Finite Element Analysis of the Lower Extremity — Piscataway, NJ
James J. Slade Scholar Research — September 2014 - May 2016

- Modeled ankle arthritis and implant solutions using SolidWorks.
- Analyzed stress profile shifts caused by total ankle arthroplasty using finite element analysis.

Publications

Peer-Reviewed

- Chahar et al., (2014). Chromatin Profiling Reveals Regulatory Network Shifts and a Protective Role for HNF4α during Colitis. *Molecular and cellular biology*, 17, 3291–3304.

Awards

2016	James J. Slade Scholar	Engineering Convocation
2015	Twitter Api Award	HackRU Spring
2014	Context.io Api Award	HackRU Spring

Activities

2016	GE Research Summit	Conference
2015	PennApps Fall	Hackathon
2013	HackNY Fall	Hackathon