Kalanand Mishra - hyperlinked résumé

Vectra Networks, Inc. ☎ **650-564-7740** ✉ **kalanand@kmishra.net** ☞ **http://kmishra.net**

Positions

2014 – Present	Data Scientist at Vectra Networks, Inc., San Jose, CA.
2008 – 2014	Research Scientist at Fermi National Accelerator Laboratory, Batavia, IL.
2003 – 2008	Research Assistant at Stanford Linear Accelerator Center, Menlo Park, CA.

Experience

Innovation	Developed empirical techniques for mining low signal-to-noise data. Performed world-best measurements in particle physics that led to Higgs boson discovery, an insight into matter-antimatter asymmetry, and acknowledgments in the Nobel prize citations of 2008 and 2013. Devised innovative application of statistical methods on Big Data for hypothesis testing and anomaly detection.
Analytics	Developed algorithms to detect cybersecurity threats using advanced machine-learning techniques. Specifically focused on preventing breaches that could lead to direct financial losses such as ad spam, click-fraud, and data exfiltration.
Leadership	Headed several large (20–40 member) scientific teams. Led successful efforts to increase both quality and speed of bringing research to fruition. Served as referee for American Physical Society journals.
Collaboration	Extensive experience working in large, diverse teams of data scientists. Developed algorithms, wrote APIs, and organized data analysis workshops.

Technical Skills

Platforms	Linux/UNIX, MacOS, and virtual machine environments - C++, Python, Scala, Spark, JavaScript - Code workflow using Git; task tracking via JIRA, Bitbucket, Confluence - Experience with SQL and NoSQL databases, Hadoop cluster - Multithreaded computing optimized for Big Data analytics.
Data analysis	Using tools such as - NumPy, SciPy, Pandas for analytics; Matplotlib for visualization - Scikit-learn for machine learning (*regression, neural nets, deep learning, etc.*) - Bayesian modelling and Monte Carlo techniques for anomaly detection.

Education

2008	Ph.D. (Particle Physics), University of Cincinnati, Ohio, USA.
2000	M.S. (Physics), Jawaharlal Nehru University, New Delhi, India.

Miscellaneous

- Primary author of 15+ (h-index 14, avg. citation 120) and co-author of 700+ (h-index 104, avg. citation 70) peer reviewed papers. To put this in perspective, the inventor of h-index Jorge Hirsch suggests a benchmark value of 12 for tenure at major research universities, 18 for full professorship, and 45 for membership in the National Academy of Sciences.

- Citizenship: United States.
- LinkedIn profile at https://www.linkedin.com/in/kalanandmishra
- Complete academic CV available at http://kmishra.net/cv.pdf