VIKAS NATESH

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EDUCATION

New York University, Courant Institute of Mathematical Sciences — New York, NY
Master of Science in Computer Science: GPA: 3.9/4.0 — Sep 2017 – present
Research Assistant – NYU Systems Group — Jan 2018 - present

- Conduct research on low-latency stream processing algorithms using programmable switch ASICs with Prof. Anirudh Sivaraman
- Built a library and compiler for stateless and stateful SQL-like streaming queries in the P4 language

Graduate Teaching Assistant — Sep 2018 - present

- Course assistant and grader for undergraduate operating systems course (CSCI-UA.0202) with Prof. Yan Shvartzshnaider
- Grader for undergraduate intro to computer science course (CSCI-UA.0101) with Prof. Candido Cabo

Machine Learning Researcher - Bayesquare Foundation: — Oct 2017 – Feb 2018

- Designed and built an indicator kriging model to predict and visualize crime across NYC police precincts

The University of Chicago — Chicago, IL
Bachelor of Arts in Economics, Bachelor of Arts in Biological Sciences — Sep 2009 – June 2013

EXPERIENCE

DC Energy — Washington, DC
Software Engineer — July 2015 – July 2017

- Member of portfolio management and data infrastructure teams in a quantitative trading firm specializing in electricity derivative markets
- Developed trading systems for risk management, energy auction automation, and data warehousing using R, MySQL, and PHP in a distributed Linux environment
- Designed and built models for risk analysis, implementing distributed Monte Carlo and hierarchical clustering
- Primary maintainer of custom NoSQL caching package in R
- Brought about a fivefold improvement in performance in both risk analytical engine and R caching code bases
- Presented at weekly data infrastructure team meetings
- Conducted training sessions on the firm's database architecture and automated process framework for junior developers

Scheie Eye Institute, Department of Ophthalmology at the University of Pennsylvania — Philadelphia, PA
Clinical Database Manager and Research Coordinator — June 2014 – June 2015

- Managed a 4000-patient database containing demographic, phenotypic, and genotypic information for an NIH-funded study investigating the genetic component of primary open angle glaucoma in African Americans
- Performed statistical analysis on phenotypic data to evaluate the relationship between glaucoma and other comorbidities
- Organized outreach events involving the setup of mobile eye clinics in various nursing homes and assisted living centers in Philadelphia
- Contributed to two publications in high-impact, peer-reviewed ophthalmology journals

APT Life Sciences — Philadelphia, PA
Bioinformatics Data Analyst — Nov 2014 – June 2015

- Identified publicly available genomic datasets to be analyzed by a proprietary PeCaSo™ genomic network analysis platform
- Extended genetic interaction database using python and Unix scripting

LateNightBite — Chicago, IL
Co-founder — Jan 2012 – Jan 2013

- Co-founded a company to develop a web-based coupon service providing discounts for late night consumers on food that restaurants would otherwise put to waste
- Analyzed market conditions by interviewing managers at 100 local restaurants and created a cost and revenue model
- Presented to a panel of professors and secured $10,000 in funding to jumpstart business

PUBLICATIONS

- O'Brien J.M. et.al. "Risk Factors Associated with Progression to Blindness from Primary Open-Angle Glaucoma in an African American Population." *Ophthalmic Epidemiology*. June 27, 2016. (https://www.ncbi.nlm.nih.gov/pubmed/27348239)
- Sankar P. et.al. "The SCHEIE Visual Field Grading System." *Journal of Clinical & Experimental Ophthalmology.* May 11, 2017. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5602567/)

SKILLS

Languages: Fluent in Kannada, Conversant in Spanish
Computer: C, Python, Java, R, Matlab, Stata, MySQL, PHP, x86 assembly, Rust, P4, Scheme, SML, Prolog, Linux