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| BIOGRAPHICAL SKETCH Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person.  **DO NOT EXCEED FOUR PAGES.** | | | | |
|  | | | | |
| NAME  Nothaft, Frank A | | POSITION TITLE  Graduate Student Researcher | | |
| eRA COMMONS USER NAME (credential, e.g., agency login)  FNOTHAFT | |
| EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)* | | | | |
| INSTITUTION AND LOCATION | DEGREE  *(if applicable)* | | MM/YY | FIELD OF STUDY |
| Stanford University | BS | | 06/11 | Electrical Engineering |
|  |  | |  |  |
| University of California, Berkeley | MS | | 05/15 | Computer Science |

**A. Personal Statement**

I have been a graduate student at UC Berkeley since 2013, and am the lead researcher on the ADAM, avocado, and ananas projects. I came to UC Berkeley from the high performance computing/semiconductor design area, where I worked on parallel systems for solving challenging industrial design automation problems. My current work is targeted at enabling a better understanding of genomic variation through improved computational methods that allow for tens of thousands of individuals to be jointly analyzed.

**B. Positions and Honors**

**Positions and Employment**

|  |  |
| --- | --- |
| 2011 – 2012 | Engineer, IC Design, Broadcom Corporation, Irvine, CA |
| 2012 – Present | Engineer, Staff 1, IC Design, Broadcom Corporation, Irvine, CA |
| 2013 – Present | Graduate Student Researcher, EECS Department, University of California, Berkeley, CA |

**Other Experience and Professional Memberships**

|  |  |
| --- | --- |
| 2011 | Member, IEEE |
| 2011 | Member, ACM |
| 2013 | Chair, IEEE Orange County Computer Society |
| 2014 | Student Member, ISCB |
| 2015 | Co-chair, GA4GH Containers and Workflows Working Group |

**Honors**

|  |  |
| --- | --- |
| 2011 | Departmental Honors, Department of Electrical Engineering, Stanford University |
| 2011 | Skilling Award for Teaching Excellence, Department of Electrical Engineering, Stanford University |
| 2013 | NSF Graduate Research Fellowship |

**C. Selected Peer-reviewed Publications**

**Most relevant to the current application**

1. Nothaft, F. A., Massie, M., Danford, T., Zhang, Z., Laserson, U., Yeksigian, C., ... & Patterson, D. A. (2015, May). Rethinking data-intensive science using scalable analytics systems. In Proceedings of the 2015 ACM SIGMOD International Conference on Management of Data (pp. 631-646). ACM.

2. Paten, B., Diekhans, M., Druker, B. J., Friend, S., Guinney, J., Gassner, N., ... & Haussler, D. (2015). The NIH BD2K center for big data in translational genomics. Journal of the American Medical Informatics Association, ocv047.

**Additional recent publications of importance to the field (in chronological order)**

1. Zhang, Z., Barbary, K., Nothaft, F. A., Sparks, E., Zahn, O., Franklin, M. J., & Perlmutter, S. (2015). Scientific Computing Meets Big Data Technology: An Astronomy Use Case. arXiv preprint arXiv:1507.03325.
2. Massie, M., Nothaft, F., Hartl, C., Kozanitis, C., Schumacher, A., Joseph, A. D., & Patterson, D. A. (2013). ADAM: Genomics formats and processing patterns for cloud scale computing. EECS Department, University of California, Berkeley, Tech. Rep. UCB/EECS-2013-207.
3. Malladi, K. T., Nothaft, F. A., Periyathambi, K., Lee, B. C., Kozyrakis, C., & Horowitz, M. Towards energy-proportional datacenter memory with mobile DRAM. In 2012 IEEE 39th Annual International Symposium on Computer Architecture (ISCA).

**D. Research Support**

**Ongoing Research Support**