

# James E. Dykes

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## Education

- **Master of Science in Information Science**, University of Colorado, Boulder, CO. 2022
- **All but dissertation** for Ph.D. in **Statistics**, University of California, Davis, CA. 1989-1992
- **Master of Science in Statistics**, Utah State University, Logan, UT. 1990
- **Bachelor of Science in Mathematics**, Utah State University, Logan, UT. 1987

## Experience

### **Aug 2022-Present, Instructor, Department of Computer Science, University of Colorado, Boulder, CO**

- Teach undergraduate Computer Science courses as assigned
- Hold office hours and consult with students on courses
- Serve as a member of the Undergraduate Curriculum Committee

### **March 2022-Present, Senior Data Scientist, Vertx Partners, Morgantown, WV.**

- Develop tools that analyze the patterns of usage in United States Department of Defense budget justifications
- Create databases and applications needed to aggregate and analyze the Department of Defense budget
- Position is part-time and remote

### **Sept 2015-July 2021, Director of Computing and Research Services, Institute of Behavioral Science, University of Colorado, Boulder, CO**

- Manage desktop computing and support for approximately 200 faculty students and staff of IBS.
- Perform statistical consulting for faculty and graduate students
- Manage web sites, servers and storage for faculty researchers
- Manage security for highly confidential data

### **2005-Sept 2015, Sr. Director of Engineering, Seagate Technology, Longmont, CO** **2014-2015, Cloud Systems and Services**

- Design cloud systems for OpenStack Swift, Scalify, CleverSafe, Hadoop
- Manage research from idea through productization

### **2012-2014, Data Center Operations**

- Hired and managed team of 35 directors, engineers, statisticians and technicians
- Designed cloud systems for customer data centers
- Integrated cloud systems into existing IT environments

### **2010-2012, Emerging Business Organization**

- Developed WiFi drives
- Hired and managed team of 15 technologists and engineers
- Developed statistical methods to forecast customer usage and prevent failures

### **2008-2012, Advanced Storage Division**

- Lead development and productization of hybrid HDDs (SSHD)
- Managed team of 30 engineers and outside contractors

- Forecast customer failures based on usage and developed mitigation strategies

2005-2008, **Hard Drive Security**

- Lead development and productization of Full Disc Encryption Products (FDE)
- Built team of 30 engineers and test developers in Singapore

2002-2005, **Various**, Seagate Technology, Shakopee MN

2003-2005, **Director of Advanced Reliability**

- Formed and grew statistical analysis team on field failures to 12 statisticians
- Developed framework for predicting drive failures from customer usage

2002-2003, **Senior Engineer** in **Systems Architecture**

- Developed tools to measure, model and predict customer usage of drives

2000-2002, **Senior Architect**, Dartmouth College Computing Services, Hanover, NH

- Upgraded campus systems to web architecture
- Led campus security team in implementing firewalls, remote access, VOIP
- Redesigned campus networking to support web architecture

1997-2000, **Director of Data Analysis**, Center for Evaluative Clinical Sciences, Hanover, NH

- Designed and implemented big data system with over 3 trillion records
- Built security to allow us research access to patient medical record data
- Lead analysis of medical data to understand patient usage of medical services and physician case management patterns
- Built team of 7 statisticians and technicians to support faculty research, system administration and desktop support
- Wrote grants to government and foundations to support research and computing
- Managed research and computing cores in awarded grants

1994-1997, **Director of Informatics**, Dartmouth Medical School, Hanover, NH

- Grew staff from 3 to 60 statisticians, data managers and software developers
- Managed over 300 research projects from over 50 researchers
- Wrote grants alone and with researchers to get funding for group
- Developed clinical trials system to automate survey collection and analysis
- Analyzed studies on behavioral aspects of diet and cancer

1992-1994, **Statistician**, Dartmouth College Computing Services, Hanover, NH

- Performed analyses for Social Science Research Center faculty and staff
- Performed analyses for Biology and Medical school faculty
- Taught graduate level statistics classes to Biology and Medical students
- Created computer lab for statistical computing
- Purchased and maintained Social Science datasets

1988-1992, **Statistician**, University of California Davis Statistical Laboratory, Davis, CA

- Performed analyses for Social Science faculty and staff
- Created and taught classes on categorical data and repeated measures analyses
- Taught undergraduate level statistics classes

## Teaching

- **Instructor, Department of Computer Science**, CSCI 3202, Introduction to Artificial Intelligence, Fall 2023, UC Boulder
- **Instructor, Department of Computer Science**, CSCI 4448/5448, Object Oriented Application Design, Fall 2023, UC Boulder
- **Instructor, Department of Computer Science**, CSCI 3100, Software and Society, Fall 2023, UC Boulder
- **Instructor, Department of Computer Science**, CSCI 3202, Introduction to Artificial Intelligence, Spring 2023, UC Boulder
- **Instructor, Department of Computer Science**, CSCI 1200, Introduction to Computational Thinking, Fall 2022, UC Boulder
- **Instructor, Department of Computer Science**, CSCI 3100, Software and Society, Fall 2022, UC Boulder
- **Teaching Assistant, Information Science 2201, Computational Reasoning 2: Representations of Data**, Spring 2022, Professor Jason Zietz
- **Seminar: Multiple Imputation** (with Josh Goode). Fall 2020. UC Boulder
- **Seminar: Publication Quality Graphics**. Fall 2020. UC Boulder
- **Seminar: Multilevel Models for Clustered Data** (with Josh Goode). Fall 2020. UC Boulder
- **Seminar: Multilevel Models for Longitudinal Data** (with Josh Goode). Spring 2020.
- **Seminar: Using MAXQDA for Qualitative Data**. Spring 2020. UC Boulder
- **Teaching Assistant, Information Science 4602/5602, Digital Visualization**, Spring 2018
- **Seminar: Introduction to R**. Summer 2016, UC Boulder
- **Seminar: Introduction to R**. Winter 2016, UC Boulder
- **Instructor, Biology 129. Statistics and Experimental Design II**. Ph.D. Level. Winter 1996, Dartmouth
- **Instructor, Biology 128. Statistics and Experimental Design I**. Ph.D. Level. Fall 1995, Dartmouth
- **Instructor, Biology 130. Categorical Data Analysis**. Ph.D. Level. Fall 1994. Dartmouth
- **Instructor, Biology 129. Statistics and Experimental Design II**. Ph.D. Level. Winter 1994, Dartmouth
- **Instructor, Biology 128. Statistics and Experimental Design I**. Ph.D. Level. Fall 1993, Dartmouth
- **Seminar: Repeated Measures**. Spring 1990, UC Davis
- **Instructor, APS 316. Statistics for business**. Summer 1986, Utah State University

## Publications

- Naumenko, D. J., Dykes, J., O'Connor, G. K., Stanley, Z., Affara, N., Doel, A. M., ... & Bernstein, R. M. 2021. **A Novel method for the identification and quantification of weight faltering**. *American Journal of Physical Anthropology*.
- Pinter, A. T., Jiang, J. A., Gach, K. Z., Sidwell, M. M., Dykes, J. E., & Brubaker, J. R. (2019). " **Am I Never Going to Be Free of All This Crap?" Upsetting Encounters**

**with Algorithmically Curated Content About Ex-Partners.** *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW) (2019), 1-23.

- Bica, M., Demuth, J, Dykes, J., and Palen, L. **Communicating Hurricane Risks: Multi-Method Examination of Risk Imagery Diffusion.** *In Proceedings of the 2019 ACM Conference on Human Factors in Computing Systems.*
- M P Gutmann, D Brown, A R Cunningham, J Dykes, et. al. 2016. **Migration in the 1930s: Beyond the Dust Bowl.** *Social Science History* 40, no. 4: 707-740.
- D Anderson, J Dykes, E Riedel. 2003. **More than an interface—SCSI vs. ATA.** *Proceedings of the 2<sup>nd</sup> Annual Conference on File and Storage Technology (FAST):* 245-257.
- M R Karagas, T A Stukel, J Dykes, J Miglionico, M A Greene, M Carey, B Armstrong, J M Elwood, R P Gallagher, A Green, E A Holly, C S Kirkpatrick, T Mack, A Østerlind, S Rosso, and A J Swerdlow. 2002. **A pooled analysis of 10 case–control studies of melanoma and oral contraceptive use,** *British Journal of Cancer*, **86**, 1085–1092
- T A Stukel, E Demidenko, J Dykes, M R Karagas. 2001. **Two-stage methods for the analysis of pooled data.** *Statistics in Medicine*, **20**: 2115–2130
- R D Masters, M J Coplan, B T Hone and J E Dykes. 2000. **Association of Siliocoflouride Treated Water with Elevated Blood Lead.** *NeuroToxicology* **21(6)**: 1091-1100.

### Lightly Reviewed Conference Materials

- Dykes, J., Cummings, J., Naumenko, D., O'Connor, G., Stanley, Z., Affara, N., Dunger, D., Ong, K., Prentice, A., Moore, S., Bernstein, R. (2019, March). **Quantifying growth pulses across the first year of life in rural Gambian infants.** Poster session presented at the *American Society of Physical Anthropology, Cleveland, OH., March 2019*
- Naumenko, D., Dykes, J., O'Connor, G., Stanley, Z., Affara, N., Dunger, D., Ong, K., Prentice, A., Moore, S., Bernstein, R. (2019, March). **Quantifying growth faltering across the first year of life in rural Gambian infants.** Poster session presented at the *American Society of Physical Anthropology, Cleveland, OH., March 2019*
- O'Connor, G., Stanley, Z., Dykes, J., Naumenko, D., Affara, N., Dunger, D., Ong, K., Prentice, A., Moore, S., Bernstein, R. (2019, March). **The infancy-childhood transition in rural Gambian infants.** Poster session presented at the *American Society of Physical Anthropology, Cleveland, OH., March 2019*
- Stanley, Z., Dykes, J., Naumenko, D., O'Connor, G., Affara, N., Dunger, D., Ong, K., Prentice, A., Moore, S., Bernstein, R. (2019, March). **Influence of sex, season of birth, and gestational age at delivery on growth in rural Gambian infants from birth to one year.** Poster session presented at the *American Society of Physical Anthropology, Cleveland, OH., March 2019*
- M P Gutmann, D Brown, A R Cunningham, J Dykes, et. al. 2016. **Rural Out-Migration and Environmental Shocks in the 1930s** 42<sup>nd</sup> Annual Meeting of the Social Science History Association, *Montreal, Quebec Canada, November 2-5, 2017*

### Guest Lectures

- **Data Hierarchies in a Weather Forecast**, September 12, 2023, Information Science 2131, Information Ecosystems, Professor Leysia Palen
- **Data Hierarchies in a Weather Forecast**, September 6, 2022, Information Science 2131, Information Ecosystems, Professor Leysia Palen
- **Data Hierarchies in a Weather Forecast**, February 3, 2022, Information Science 2131, Information Ecosystems, Professor Leysia Palen

## Patents

- Anthony John Pronozuk, Shawn Jacob Noland, James Edward Dykes, William Leon Rugg, **Maintaining thermal uniformity among devices in a multi-device enclosure**, US Patent 9192078B2, Issued 11/17/2015
- James Dykes, Edward Jen-Yu Chen, Peter Viscarola, Scott Noone, **Managed reliability of data storage**, US Patent 9256566B1, Issued 2/9/2016
- Anthony John Pronozuk, Shawn Jacob Noland, James Edward Dykes, William Leon Rugg, Chau Chin Low, **Multi-Device Storage Enclosure with Extendable Device Support Sleds**, Patent Pending. Provisional US Patent 20140362515A1, Published 12/11/2014
- Anthony John Pronozuk, Shawn Jacob Noland, James Edward Dykes, William Leon Rugg, **Secure Erasure of Processing Devices**, Patent Pending. Provisional US Patent 20140365743A1, Published 12/11/2014
- Jon Criswell, Jian Liang, Rex Yik Chun Ching, James Edward Dykes, **Electronic device data distribution**, Patent Pending. Provisional US Patent 20150074340A1, Published 3/12/2015
- Guy David Frick, Robert Dixon, Jerry D. Dallmann, Anthony Pronozuk, James Dykes, **Controller interface for operation of multiple storage drives**, Patent Pending. Provisional US Patent 20150363109A1, Published 12/17/2015
- James Edward Dykes, **Mobile data storage device with power management**, Patent Pending. Provisional US Patent 20160224096A1, Published 8/14/2016

## Other

- **Member, Board of Directors**, OUR Center, Longmont, CO. 2014-2017
- **Treasurer, Board of Directors**, OUR Center, Longmont, CO. Aug 2016-Jun 2017
- **Executive Education program**, Harvard Business School, 2005-2006