



V. K. Cody Bumgardner, PhD

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About Me

In an over 20 year career, working across computational disciplines, I have developed an exceptional breadth and depth of technical knowledge, ranging from transistors to computational theory. My mission is to advance society through science, engineering, and technology.

Education

University of Kentucky
Ph.D Computer Science 2017
B.Sc Computer Engineering 2009

Interest

Artificial Intelligence, CPS/IoT, Biomedical Informatics, Data Science, Distributed Systems, Edge Computing, High Performance Computing, Network Communications, and Smart Communities

Service

Grant Panelist @ NSF
2015, 2018, 2019

Fellowship Panelist @ DoD
2018, 2019, 2020

Journal Reviewer @ IEEE, Elsevier
Science 2018, 2019, 2020

Organizing or Technical Program
Committee @ 22 National and
International Conferences
2017-2020

Community lead @ US Ignite,
Lexington as a Smart City

Achievements

Inaugural Chief, Division of Pathology Informatics
Founded division, launched cloud-based NGS genomic processing, AI in digital pathology, and laboratory analytics platforms.

Inaugural Director, Research Computing
Lead transition from traditional leased HPC to modern platforms and practices. Significantly improved state-wide research infrastructure without additional funding.

Inaugural Chair, Enterprise Architecture Group
Oversaw over 150 projects resulting in 25 million dollars in operational savings.

Papers, Books, and Posters
Published 11 peer reviewed papers, 9 peer reviewed posters, contributed a book chapter, and wrote the best selling book OpenStack In Action.

Speaking and Media
Presented 23 abstracts, 19 invited talks, and 11 media contributions.

Extramural Funding
PI, Co-PI, or Senior Personnel on 10 grants accounting for 5.98 million in funding.

Teaching and Instruction
Pathology resident training, CS385: Asynchronous Communications, CS405G: Introduction to Databases, CS505: Intermediate Topics in Database Systems, CS610: Masters Project, CS612: Distributed AI Training, CS612: Real-time Healthcare Analytics, CS612: Digital Pathology.

Projects and Activities

Since 2015 Constellation Genomic Processing Framework
Founded an open source project for cloud-based genomic processing.

Since 2014 Cresco.Io Edge Computing Framework
Founded one of the first open source edge computing frameworks.

2015-2019 Kentucky Research Informatics Cloud (KyRIC)
Lead acquisition and technical design efforts.

2014-2017 Advanced State-Wide Research Infrastructure
Lead efforts on 40/100G Internet2 and 10G regional member service upgrade of Kentucky Regional Optical Network (KyRON).

2014-2016 Storage, Compute, and Cloud Product Development
Lead strategic collaborations with Fortune 50 technology company.

2012-2016 Advanced Campus Research Infrastructure
Lead efforts to create 40/100G science DMZ.

2011-2015 ClickBlue Streaming Video
Founded and lead team to develop a fee-based video training service.

Experience

Since 2017 Division Chief / Asst. Prof. University of Kentucky
Department of Pathology and Laboratory Medicine
Clinical faculty responsible for the Division of Pathology Informatics.

Since 2017 Assistant Professor Department of Computer Science (CS)
Joint courtesy faculty advising graduate students, teaching courses, and conducting research.

2016-2019 Assistant Director Institute of Biomedical Informatics
Provided biomedical-focused computational expertise.

2016-2017 Director ITS - Research Computing Division
Provided leadership and vision to advance research computing.

2010-2016 Chief Technology Architect Information Technology Services (ITS)
Responsible for enterprise-wide technology portfolio.

2008-2010 Director Enterprise Computing and Development ITS
Lead teams responsible for supporting enterprise-wide services.