Kristopher J. Overholt

Solutions Engineer
RStudio, PBC.
Austin, TX (Remote)

https://www.koverholt.com
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Summary of Qualifications

10+ years of experience working with data science and data analysis with Python and R.

9+ years of working with DevOps tooling, automation, testing, and deployments.

7+ years of academic and industry teaching experience with data science and engineering coursework.

Applying Python and R to engineering problems, data analysis, and computational models.

Administration of on-premises and cloud-based Linux systems with Docker, Kubernetes, and Hadoop.

Education

Ph.D. in Civil Engineering, The University of Texas at Austin, 2013

M.S. in Fire Protection Engineering, Worcester Polytechnic Institute, 2010

B.S. in Fire Protection Engineering Technology, University of Houston–Downtown, 2008

Certifications

Pragmatic Marketing Certified - Level III (PMC-III) - November 2017

Texas Board of Professional Engineers Certified EIT #40629 - September 2008

Employment and Research Experience

Solutions Engineer — November 2018–Present
RStudio, PBC. — *Austin, TX (Remote)*
Working with customers in pre-sales and post-sales activities to integrate enterprise data science products in production environments with Python and R. Developing technical assets and documentation related to enterprise data science products. Working closely with customer success, support, and product engineering teams. Specializing in enterprise IT infrastructure and DevOps as well as product integrations with Python, Kubernetes, Slurm, and Spark.

Senior Product Manager / Software Engineer — February 2015–October 2018
Anaconda, Inc. — *Austin, TX*
Worked with customers and users to understand market problems, then formulate and prioritize repeatable solutions in an enterprise data science platform with Python and R. Performed DevOps, automation, and QA testing for data science platform built on Docker and Kubernetes. Developed tools/products to manage Python packages across bare-metal and cloud-based clusters. Managed cluster computing products that integrate Python with Hadoop and Spark. Coordinated with product marketing team to create webinars, demonstrations, and sales collateral. Worked with customers as a solution architect for cluster computing and data analysis/engineering/model workflows.

Fire Protection Engineer / Software Engineer — May 2012–January 2015

National Institute of Standards and Technology — *Gaithersburg, MD*

Performed fire model verification and validation work for the US Nuclear Regulatory Commission (NRC) related to empirical correlations and Fire Dynamics Simulator (FDS). Worked with the FDS development team on verification and validation, continuous integration testing, and quality metrics. Conducted fire modeling studies to provide insight on the fire development and thermal conditions during firefighter fatality and injury incidents. Conducted full-scale experimental work related to improving firefighter tactics and safety. Developed sensor-based smart firefighting technology.

Graduate Research Assistant / Software Engineer — January 2010–May 2013

The University of Texas at Austin — *Austin, TX*

Research assistant on issues related to fire modeling, inverse fire modeling problems, fire suppression systems in nuclear gloveboxes, firefighter line of duty injuries/deaths, wildland fire experiments and modeling, and positive pressure ventilation experiments and simulations.

Graduate Researcher / Software Engineer — May 2011–August 2011

Southwest Research Institute — *San Antonio, TX*

Performed data analysis on the project: Reducing Uncertainty of Quantifying the Burning Rate of Upholstered Furniture. Fire modeling and data analysis work for full-scale upholstered furniture fire experiments sponsored by the National Institute of Justice (NIJ). Developed fire model simulations and guidance for the forensic investigation of fire incidents involving upholstered furniture.

Adjunct Faculty — August 2010–May 2011

University of Houston–Downtown — *Houston, TX*

Instructor for fire protection engineering courses including Fire Dynamics, Fire Modeling, Structural Fire Safety, and Advanced Problems in Fire and Safety in the Fire Protection Engineering Technology program.

Research Assistant and Teaching Assistant — August 2008–December 2009

Worcester Polytechnic Institute — *Worcester, MA*

Teaching assistant to graduate level courses in the Department of Fire Protection Engineering. Research assistant in the fire science laboratory for small-scale commodity tests, including the cone calorimeter. Experimental determination of a mass transfer number to assess the flammability hazard and ranking of storage commodities for warehouse fire protection. The goal was to better classify and protect commodity storage in warehouse facilities and predict upward flame spread rates in warehouse fires.

Summer Undergraduate Research Fellowship — May 2007–August 2007

National Institute of Standards and Technology — *Gaithersburg, MD*

Performed fire model verification and validation study of intermediate–scale cable fire experiments conducted by the Nuclear Regulatory Commission (NRC) related to the Thermally-Induced Electrical Failure (THIEF) Model in Fire Dynamics Simulator (FDS). Contributed to the FDS User's Guide and Verification & Validation Guides.

Skills and Coursework

Python / NumPy / SciPy / pandas
Data Science Workflows
DevOps, CI/CD, and Automation
Terraform, Salt, Ansible
scikit-learn / Tensorflow
Docker / Container-Based Workflows
Hadoop Configuration and Administration
Mac OS X / Linux / Windows
Django / Flask / WordPress
Matlab / LabVIEW
Small-Scale and Large-Scale Experiments
Scientific / Technical Copy Editing
Scientific / High-Performance Computing
Scientific Visualization & Data Analysis
Instrumentation and Data Collection
LaTeX
Computational Fluid Dynamics
Engineering Mechanics
Heat Transfer
Combustion
Thermodynamics
Differential Equations
Incompressible Flow
Fluid Mechanics
Numerical Methods

R / Shiny / RStudio
Predictive Model Development and Deployment
Slurm and HPC Clustering Technologies
Cloud Infrastructure / AWS / GCP / Azure
Visualization: matplotlib / seaborn / ggplot
Kubernetes Configuration and Administration
Hadoop / Spark / PySpark Data Analysis
Fortran / C++
Solution Architecting / Requirements Gathering
Data Analytics Platforms
NIST Fire Dynamics Simulator
CFAST / BRANZFIRE Zone Models
Performance-Based Design
Fire Dynamics
Fire Alarm Signaling Systems
Structural Design for Fire Safety
Fire Safety and Hazard Recognition
Building Fire Safety
Automatic Fire Suppression
Industrial Safety
Fire Modeling
HVAC Design
Indoor Air Quality: Transport and Control
Human Factors in Fire Safety
Human Exposure to Indoor Air Pollution

Teaching and Tutor Experience

Adjunct Faculty — August 2010–May 2011
Department of Engineering Technology, University of Houston–Downtown
Courses: Fire Dynamics, Fire Modeling, Structural Fire Safety

Teaching Assistant — January 2010–May 2010
Department of Mechanical Engineering, The University of Texas at Austin
Courses: Heat Transfer Lab

Teaching Assistant — August 2008–December 2009
Department of Fire Protection Engineering, Worcester Polytechnic Institute
Courses: Fire Dynamics, Fire Protection Systems, Building Fire Safety

Tutor and Lab Assistant — August 2007–May 2008
Department of Engineering Technology, University of Houston–Downtown

Memberships

Member, Society of Fire Protection Engineers, 2004–2015

Member, National Fire Protection Association, 2014–2015

Member, International Association for Fire Safety Science, 2011–2015

President, SFPE UT Student Chapter, 2010–2012

President, SFPE WPI Student Chapter, 2009

Founding President, SFPE UHD Student Chapter, 2007

Honors and Awards

Jack Bono Award for Engineering Communications, Society of Fire Protection Engineers, 2017

Best Thesis Award "Excellence in Research", International Association for Fire Safety Science, 2014

Harry C. Bigglestone Award for Excellence in Communication of Fire Protection Concepts, Fire Technology, National Fire Protection Association, 2013

Honorable Mention, NSF Graduate Research Fellowship, 2009 & 2010

2nd place, Combustion Art Competition, 6th U.S. National Combustion Meeting, 2009

Gerald M. Maatman Fellowship, Kemper Foundation; Fire Science Laboratory, WPI, 2009

Outstanding Graduate – Safety and Fire Engineering Technology, UHD, 2008

LS-AMP Outstanding Scholar Award – Highest GPA in Engineering Technology Dept., UHD, 2008

Brown Foundation Leadership Award – Scholars Academy, UHD, 2007 & 2008

Hat's Off Award, Society of Fire Protection Engineers Annual Conference, 2007

Outstanding Student – Safety and Fire Engineering Technology, UHD, 2006 & 2007

Louis Stokes Alliance Minority Participation Scholarship, National Science Foundation, 2006

Red Rose Scholarship, UHD, 2006

Rookie of the Year, Klein Fire Department, 2002

Volunteerism

Webmaster Chair, Texas Exes Highland Lakes Chapter; Marble Falls, TX, 2019–Present

President, Overholser Family Association; Lancaster County, PA, 2017–2019

Webmaster, North Austin Civic Association; Austin, TX, 2010–2013

Orphanage work, Casa Hogar Douglas; Monterrey, Mexico, January 2007

Community Involvement Day; UHD, September 2006

Ed's Bayou Cleanup; UHD, Spring 2006

Emergency Disaster Preplanning; Loving and Caring Arms Adult Care Facility, March 2006

Tactical Suppression Firefighter, Klein Fire Dept. Station 32; Houston, TX, 2002–2005

Fire alarm system upgrades, Sweetwater Christian School; Houston, TX, 2005