

# Rainer Karcher

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GitHub:

[www.github.com/rtkarcher](https://www.github.com/rtkarcher)



LinkedIn:

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## SKILLS

DevOps & CI/CD Principles

Grant Writing & Project Management

Web Development

Technical Writing & Documentation

Scripted Automation & Monitoring

Virtualization & Containerization

Database Administration (MySQL)

AWS / GCP / Microsoft Azure / Chef / Jenkins

Atlassian Jira / Trello / Slack / GitHub

PHP / JavaScript / jQuery / HTML / CSS

Python / R / Bootstrap / WordPress / Drupal

Unix / Linux (RHEL, CentOS, Ubuntu) / OS X

Microsoft Word / Excel / SharePoint / Outlook

Server Provisioning & Architecture

## EXPERIENCE

### Grants Manager

Penelope House, Inc.

October 2024 — Present

Mobile, AL

- Coordinating and monitoring grant-funded programs, reporting to the Chief Financial Officer (CFO). Establishing and maintaining working relationships with funding source contacts and monitors; performing all external compliance reporting responsibilities to funding and donor agencies for current federal, state, public, and private grants.
- Processing regular grant submissions, maintaining grant records, tracking the expenditures and reimbursements of grant funds. Preparing letters of intent (LOI) and requests for funds, developing proposals, processing payments as needed.
- Managing client and population-level data, utilizing databases (Osnum, SQL) to prepare reports of served population's demographic data informing statistical reports for both internal and external program evaluations.
- Website development and support (WordPress, Drupal, MySQL).

### Technical Project Consultant (Remote)

Self-Employed

February 2019 — Present

Mobile, AL

- Freelance website/application development (WordPress, Bootstrap, Drupal) & IT consulting; automation scripting (Bash/Shell, Chef, Ansible). Database management (MySQL, Oracle): database backups, migration, & architectural design; IT systems infrastructure consultation. Producing technical documentation, tutorials, grant proposals.

### System Administrator II (Hybrid Remote / Contract)

University of South Alabama Health System, IT Infrastructure

February 2024 — July 2024

Mobile, AL

- Grant-funded contract to accelerate IT infrastructure onboarding and initiate vendor partnerships following the acquisition of Providence Health by the USA Health system.
- Systems administration and identity access management of computing environments.

### Systems Engineer (Remote / Contract)

Evonik Industries GmbH

June 2022 — June 2023

Mobile, AL / Remote

- Site reliability engineer for chemical/industrial plant software solutions, infrastructure, database management, Systems Applications and Processing (SAP).
- Full-stack software development (.NET, C#, Python, JavaScript, jQuery) and deployment in an enterprise-scale environment (AWS, Google Cloud Platform). Project management from concept to implementation. Database management (SQL / Oracle).
- Licensing, warranty, and support services renewals related to applications & systems.
- Provided mentorship as needed, collaborated with a globally distributed operations team.

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## **Medical Informatics Programmer Analyst II (Contract)**

University of South Alabama, Center for Strategic Health Innovation

Feb. 2018 — Feb. 2019  
Mobile, AL

- Lead full-stack developer, responsible for front-end development (Drupal / Bootstrap / HTML5 / CSS / jQuery) and back-end infrastructure (Linux / Apache / MySQL / PHP).
- Systems administration of web hosting & data storage servers (CentOS).
- Managed project cost estimates and budgetary priorities, technical specifications, implementation planning, and deployment across University system architecture.

## **Web Developer (Remote)**

Self-Employed

July 2017 — Jan. 2018  
Kansas City, MO / Remote

- Website development (WordPress, Bootstrap, Drupal); database management (MySQL).
- Published technical documentation, tutorials, onboarding guides, infrastructural manuals.

## **Research Associate II**

University of Kansas Medical Center

Hoglund Brain Imaging Center / Alzheimer's Disease Center

May 2015 — July 2017  
Kansas City, KS

- Federal and private grants proposal development, manuscript preparation for publication of study findings, experimental data analysis, IT management.
- Data analysis (SPSS / R / Python / MATLAB / Bash / REDCap), imaging analysis pipeline construction to support clinical studies applying several MRI methods (MR spectroscopy, arterial spin labeling, voxel-based morphometric analysis, diffusion tensor imaging).
- Systems administration of web hosting & data storage servers (RHEL / CentOS / Ubuntu).
- Reviewed current scientific literature to guide research aims; reported research findings, experimental methods, and analyses for publication.
- Determined strategic direction and ensured scalability of laboratory IT infrastructure; managed budget priorities, licensing and training needs, and hardware acquisitions.

## **Systems Engineer (Hybrid Remote)**

Oracle Health (formerly Cerner Corporation)

Oct. 2013 — May 2015  
Kansas City, MO

- Developed & deployed Agile enterprise software solutions (PHP / Ruby / R / Bash / Perl) in a fast-paced DevOps environment; database administration (MySQL / SQL Server).
- Systems administration; monitoring (Splunk) highly-available distributed systems and high-performance computing (HPC) clusters to support big data analytics.
- Published technical documentation, tutorials, onboarding guides, architectural manuals.
- Project planning, leading and participating in collaborative code reviews (Jira, Slack), team training workshops; version control and code release management (GitHub).

## **Web Developer**

University of Alabama, Center for Materials for Information Technology

Nov. 2009 — Aug. 2013  
Tuscaloosa, AL

- Developed custom websites and applications (Bootstrap / WordPress / SharePoint / Drupal / PHP / CSS / JavaScript). Database administration (MySQL, Oracle).
- Systems administration of web hosting servers (RHEL / CentOS / Ubuntu / OS X).
- Co-managed with an interdisciplinary team a high-performance computing (HPC) cluster for research use by the Departments of Physics and Materials Science.
- Implemented low-cost open source solutions for motion-activated security cameras and automated lab facility door access within the Department of Materials Science.

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## EDUCATION

### University of Alabama

Bachelor of Arts, Anthropology / Chinese Language & Literature

Tuscaloosa, AL

## PUBLICATIONS

- Lepping RJ, Yeh H-W, McPherson BC, Brucks MG, Sabati M, **Karcher RT**, Brooks WM, Habiger JD, Papa VB and Martin LE (2023) Quality Control in Resting-State fMRI: The Benefits of Visual Inspection. *Frontiers in Neuroscience* 17:1076824.
- Ters ME, Zhou X, Lepping RJ, Lu P, **Karcher RT**, Mahnken JD, Brooks WM, Winklhofer FT, Li X, Yu ASL (2020). Biological Efficacy and Safety of Niacinamide in Patients With Advanced Polycystic Kidney Disease. *Kidney International Reports* 5 (8), 1271-1279.
- Lepping RJ, Yeh HW, McPherson BC, **Karcher RT**, Brucks MG, Papa VB, Fox AT, Brooks WM, Martin LE (2019). Counterweighting Confounds in Resting-State fMRI: Motion Correction by Weighted Regression. Society for Neuroscience Abstracts. *Abstract presented at the meeting of the Society for Neuroscience, San Diego, CA (Nov. 2016).*
- Lepping RJ, **Karcher RT**, Keselman P, Wallace D, Yu A, Martin LE, Brooks WM (2017). Inter-rater Reliability and Translational Implications of Magnetic Resonance-Based Polycystic Kidney Volume Measurements by Stereology at Early and Late Stage Disease. *Abstract published, talk delivered at the meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, HI (April 2017).*
- Morris JK, Vidoni ED, Wilkins HM, Archer AE, Burns NC, **Karcher RT**, Graves RS, Swerdlow RH, Thyfault JP, Burns JM. (2016). Impaired fasting glucose is associated with increased regional cerebral amyloid. *Neurobiology of Aging* 44, 138-42.
- **Karcher RT** (2013). Review of Eve Shapiro's Gender Circuits: Bodies and Identities in a Technological Age. *Multidisciplinary Journal of Gender Studies* 2 (3): 307-309.

## VOLUNTEERING

### Dauphin Island Sea Lab

Docent, Discovery Hall Programs

2018 – 2020

Dauphin Island, AL

- Volunteer marine educator and aquarium guide; aided with public educational events.

### Nelson-Atkins Museum of Art

Volunteer, Events & Outreach

2017

Kansas City, MO

- Aided museum staff with special events and fundraisers, banquets, auctions.

### Literacy KC

Volunteer, Special Events/Math Tutor

2017

Kansas City, MO

- Worked with adult students enrolled in the Ticket to Read program to engage math skills.

### Research Assistant

University of Alabama, Department of Biological Sciences

Earley Integrative Animal Behavior & Marine Ecology Laboratory

2011 — 2012

Tuscaloosa, AL

- Investigated physiological relationship between testosterone levels and changes in neural androgen receptors (e.g., aggressive or territorial social behavior) of the mangrove rivulus fish (*Kryptolebias marmoratus*) under direction of Ryan L. Earley, Ph.D.