

# Jeremy B Provance, MS *Curriculum Vitae*

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## CONTACT

Twitter: @jeremyprovance

Web: [jeremyprovance.github.io](http://jeremyprovance.github.io)

Offices:

- University of Missouri-Kansas City School of Medicine, 5th Floor, Department of Biomedical & Health Informatics
  - Saint Luke's Mid America Heart Institute, 9th Floor, Cardiovascular Outcomes Research Group
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## EDUCATION

*August 2017-*

### **Doctoral Candidate**

Discipline: Biomedical & Health Informatics (University of Missouri-Kansas City School of Medicine)

Dissertation Chair: Kim G Smolderen, PhD

Dissertation Committee: Brian Anderson, PhD; Matthew Bunte, MD; Mark Hoffman, PhD; Phil Jones, MS; John Spertus, MD; Todd Vogel, MD

Graduate Research Assistantship: Cardiovascular Disease Outcomes Research (Saint Luke's Mid America Heart Institute, Kansas City, Missouri)

*August 2015-May 2017*

### **Master of Science**

Discipline: Biomedical & Health Informatics (University of Missouri-Kansas City School of Medicine)

Thesis Chair: Kim G Smolderen, PhD

Thesis Committee: Julie Banderas, PharmD; Mark Hoffman, PhD; John Spertus, MD

Thesis: Decisional Conflict in Peripheral Artery Disease: Association with Treatment Choice and Health Status

*August 2010-May 2014*

### **Bachelor of Arts**

Major: Biology (William Jewell College, Liberty, Missouri)

Faculty Mentors: Scott Falke, PhD; Tara Allen, PhD

Senior Research Project: Fermentation Vessel Geometry Effects on *Saccharomyces cerevisiae* Metabolites with Gas Chromatograph-Mass Spectroscopy Analysis

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## WORK EXPERIENCE

*December 2015-*

### **Software Support Analyst**

University of Missouri-Kansas City School of Medicine, Department of Biomedical & Health Informatics, Center for Health Insights

- Manage installations of REDCap and i2b2 software platforms for UMKC School of Medicine and Truman Medical Center research stakeholders
- Completed user implementation of i2b2 software package in April 2016
- Experienced with Cerner Health Facts, Microsoft HoloLens, Oculus Rift, Ingenuity Pathways Analysis, Unity, and DNASTar software platforms

*January 2015-December 2015*

#### **Microbiologist**

Boulevard Brewing Company (Kansas City, Missouri)

- Managed microbiology quality control and analysis lab operations
- Propagated proprietary brewery yeast strains
- Implemented qPCR analysis pipeline
- Trained in chemical and physical analysis methods

*May 2014-December 2014*

#### **Production Brewer**

Tallgrass Brewing Company (Manhattan, Kansas)

- Developed post-packaging beer microbial stability program
- Developed environmental and sustainability programs

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### PEER-REVIEWED PUBLICATIONS

1. **Provance JB**, Spertus JA, Decker C, Jones PG, Smolderen KG. 2019. Assessing Patient Preferences for Shared Decision-Making in Peripheral Artery Disease: Insights from the PORTRAIT Registry. *Circulation: Cardiovascular Quality and Outcomes*. 12(8).
2. Ward-Smith P, Hawks JH, Quallich SA, **Provance JB**. 2018. Workplace incivility: Perceptions of urology nurses. *Urological Nursing*. 38(1), 20-26.
3. Hoffman MA, **Provance JB**. 2017. Visualization of Molecular Structures Using HoloLens-based Augmented Reality. *AMIA Jt Summits Trans Sci Proc*. 68-74.

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### ABSTRACTS

1. **Provance JB**, Spertus JA, Decker C, Buchanan D, Jones P, Smolderen KG. 2019. Preferences and Patterns of Shared Decision-Making in Patients With Peripheral Artery Disease: Insights From the PORTRAIT Registry. *JACC*. 73(9): S1.
2. Peri-Okonny P, Malik A, **Provance JB**, Hejjaji V, Gosch K, Spertus JA, Smolderen KG. 2019. Cross Country Comparison of Leisure Time Physical Activity Trajectories in Patients With Symptomatic Peripheral Artery Disease: Insights From the PORTRAIT Registry. *JACC*. 73(9): S1.

3. Peri-Okonny P, Malik A, **Provance JB**, Hejjaji V, Gosch K, Spertus JA, Smolderen KG. 2019. Leisure Time Physical Activity After Invasive Treatment For Symptomatic Peripheral Artery Disease: Insights From the PORTRAIT Registry. *JACC*. 73(9): S1.
  4. Malik AO, Peri-Okonny P, **Provance JB**, Gosch K, Thomas M, Labroschiano C, Spertus JA, Smolderen KG. 2019. The Association of Perceived Stress With Health Status Outcomes in Patients With Peripheral Artery Disease. *JACC*. 73(9): S1.
  5. **Provance JB**, Spertus JA, Decker C, Smolderen KG. 2018. Examining Patients' Knowledge With Regards to Peripheral Artery Disease Treatments and Outcomes: Insights From the PORTRAIT Registry. *Circulation*. 138: A15970.
  6. **Provance JB**, Spertus JA, Decker C, Smolderen KG. 2018. How Patients Value Different Treatment Goals and Outcomes in Peripheral Artery Disease Outcomes: Insights From the PORTRAIT Registry. *Circulation*. 138: A16038.
  7. **Provance JB**, Spertus JA, Safley D, Jones P, Sepucha K, Spatz E, Decker C, Smolderen KG. 2017. Decisional Conflict in Peripheral Artery Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry. *Circulation*. 136: A20550.
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#### ORAL PRESENTATIONS

1. **Visualization of molecular structures using HoloLens-based augmented reality**, Midwest Bioinformatics Conference, Data Visualization Session, Kansas City, April 2017
  2. **Visualization of molecular structures using HoloLens-based augmented reality**, American Medical Informatics Association Joint Summits for Translational Science, Data Visualization Session, San Francisco, March 2017
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#### MODERATED POSTER PRESENTATIONS

1. **Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry**, American College of Cardiology Scientific Sessions, New Orleans, March 2019 [poster]
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#### POSTER PRESENTATIONS

1. **The Effects of Insurance Status on the Route Type of the Catatonia Medication Prescribed**, UMKC Neurology Student Poster Presentations, Dec 2019 [poster]
2. **Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry**, Saint Luke's Hospital Annual Research Day, May 2019 [poster]
3. **Studying Non-Traumatic, Lower-Limb Amputations in the Cerner Health Facts EMR Database**, UMKC Health Sciences Student Research Summit, April 2019 [poster]

4. **Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry**, UMKC Health Sciences Student Research Summit, April 2019 [poster]
5. **Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry**, UMKC Community of Scholars Research Symposium, March 2019 [poster]
6. **Examining Patients' Knowledge with Regards to Peripheral Artery Disease Treatments and Outcomes: Insights from the PORTRAIT Registry**, American Heart Association Scientific Sessions, Chicago, November 2018 [poster]
7. **How Patients Value Different Treatment Goals and Outcomes in Peripheral Artery Disease Outcomes: Insights from the PORTRAIT Registry**, American Heart Association Scientific Sessions, Chicago, November 2018 [poster]
8. **The Effect of Language Barrier on Prescribing of Pain Medication for Patients Diagnosed in the Emergency Department with Kidney Stones**, Truman Medical Center Emergency Medicine Resident Research Day, May 2018 [poster]
9. **Decisional Conflict in Peripheral Arterial Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry**, Saint Luke's Hospital Annual Research Day, Kansas City, April 2018 [poster]
10. **Comparison of a National and a Local Electronic Health Data Warehouse for Clinical Laboratory Quality Improvement Research**, Midwest Bioinformatics Conference, Columbia MO, April 2018 [poster]
11. **Decisional Conflict in Peripheral Arterial Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry**, American Heart Association Scientific Sessions, Anaheim, November 2017 [poster]

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## AWARDS

2019 - **3rd Place (Poster)**, UMKC Community of Scholars Research Symposium

2019 - **Travel grant funded by Ida Bamberger Memorial Research Award (\$750)** to present:

- Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry, American College of Cardiology Scientific Sessions, New Orleans, March 2019

2019 - **Travel grant funded by UMKC School of Graduate Studies (\$800)** to present:

- Preferences and Patterns of Shared Decision-Making in Patients with Peripheral Artery Disease: Insights from the PORTRAIT Registry, American College of Cardiology Scientific Sessions, New Orleans, March 2019

2018 - **Travel grant funded by UMKC Student Activity Fee (\$1,200)** to present:

- Examining Patients' Knowledge with Regards to Peripheral Artery Disease Treatments and Outcomes: Insights from the PORTRAIT Registry, and

- How Patients Value Different Treatment Goals and Outcomes in Peripheral Artery Disease Outcomes: Insights from the PORTRAIT Registry, American Heart Association Scientific Sessions, Chicago, November 2018

2018 - **Sarah Morrison Student Research Award funded by UMKC Office of Research Administration** (\$2,500) to complete the project:

- Studying Amputations in the Cerner Health Facts Database: Overlap with Peripheral Artery Disease, Diabetes, and Prognostic Outcomes

2017 - **Travel grant funded by UMKC Student Activity Fee** (\$1,200) to present:

- Decisional Conflict in Peripheral Arterial Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry, American Heart Association Scientific Sessions, Anaheim, November 2017

2017 - **Travel grant funded by UMKC School of Graduate Studies** (\$800) to present:

- Decisional Conflict in Peripheral Arterial Disease: Association with Treatment Choice and Health Status in the PORTRAIT Registry, American Heart Association Scientific Sessions, Anaheim, November 2017

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## GRANT PARTICIPATION

2016-2018

**Electronic Data Warehouse Analyst** (0.2 FTE)

Project: Practice-Based Evidence Using Local and National Data for Quality Improvement [press release]

Principal Investigators: Mark Hoffman, PhD; Kamani Lankachandra, MD

Funding Agency: Center for Disease Control (RFA-OE16-1602)

Grant amount: \$956,553 (3 years)

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## TEACHING & GUEST LECTURES

1. **Discussion of Preparing Next-generation Scientists for Biomedical Big Data: Artificial Intelligence Approaches**, UMKC School of Medicine Multi-disciplinary Seminar Guest Lecture, September 2019 [slides]
2. **Teaching Assistant, MEDB 5512: Clinical Trials (Prof. Kim Smolderen)**, Department of Biomedical & Health Informatics (UMKC School of Medicine), Spring 2019
3. **Generalized Linear Mixed Models-Logistic Regression**, Biostatistics III: Multilevel Analysis Course Student Lecture, November 2018
4. **Introduction to Digital Open Science**, UMKC School of Medicine Multi-disciplinary Seminar Guest Lecture, October 2018 [slides]
5. **Using Cerner i2b2 and Health Facts for Clinical Trials and General Research**, Clinical Trials Graduate Course Guest Lecture, UMKC School of Medicine, February 2018

6. **Visualization of molecular structures using HoloLens-based augmented reality**, UMKC School of Medicine Multi-disciplinary Seminar Guest Lecture, October 2017
  7. **Using the De-identified Cerner i2b2 Database as a Research Resource**, UMKC School of Medicine Year 3 Medical Student Neuroscience Course Guest Lecture, October 2017
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#### RESEARCH MENTORSHIP

2019 - Madeline Johnson (Medical Student), University of Missouri-Kansas City School of Medicine

2019 - Yasser Sammour, MD (Internal Medicine Resident Physician), University of Missouri-Kansas City School of Medicine

2019 - 3rd Year Neuroscience Statistical Mentorship (Group 1), University of Missouri-Kansas City School of Medicine

2019 - 3rd Year Neuroscience Statistical Mentorship (Group 2), University of Missouri-Kansas City School of Medicine

2019 - 3rd Year Neuroscience Statistical Mentorship (Group 3), University of Missouri-Kansas City School of Medicine

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#### REVIEWING & JUDGING

Saint Luke's Hospital Research Day (Poster Judge, May 2019)

American Heart Association, *Circulation: Cardiovascular Quality and Outcomes* (Student Reviewer, 2017-)

American Medical Informatics Association, *Informatics Summits* (Abstract Reviewer, 2017-)

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#### PROFESSIONAL MEMBERSHIP

American College of Cardiology (Student Member, 2019-)

American Heart Association (Student Member, 2017-)

American Medical Informatics Association (Student Member, 2017-)

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#### PODCAST APPEARANCES

**Role in implementing i2b2 software, how i2b2 facilitates research goals, and challenges within clinical trials**, The Research Rundown Podcast Series, Episode 3, Cerner Corporation, July 2018

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#### SERVICE LEADERSHIP

**UMKC Graduate Student Council**, *President (2019), Vice President (2018), Secretary (2016, 2017)*

**William Jewell College Presidential Scholars Mentorship Program**, *Mentor*

Appointed July 2019

**UMKC School of Graduate Studies Strategic Planning Committee, *Student Representative***  
Appointed January 2019-May 2019

**UMKC School of Graduate Studies Assistantship and Tuition Task Force, *Student Representative***  
Appointed January 2019-May 2019

**Golden Key International Honor Society, *Treasurer (2016)***  
Inducted January 2016

**Omicron Delta Kappa Honor Society**  
Inducted January 2016

**UMKC Biomedical & Health Informatics Chair Search Committee, *Student Representative***  
Appointed August 2016-October 2017

**UMKC Biomedical & Health Informatics Curriculum Steering Committee, *Student Representative***  
Appointed May 2016-May 2017

**Phi Gamma Delta-Zeta Phi, Board of Graduate Advisors**  
Appointed May 2014

**William Jewell College Student Senate, *President (2013), Treasurer (2014, 2012)***

**Phi Gamma Delta-Zeta Phi, *Member Education (2014), Treasurer (2013), Judicial Chair (2012)***

**William Jewell College Cardinal Hosts**  
Appointed 2011-2014

**Missouri Boys State Staff Counselor**  
Summer 2010

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## PROGRAMMING

**Advanced:** R, SAS

**Intermediate:** SQL, MongoDB, Python

**Basic:** PHP, HTML, CSS

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