

# Josua Krause

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## Personal Information

date of birth: January 18th, 1988  
place of birth: Isny im Allgäu  
nationality: Germany

## Education

### University, NYU Tandon School of Engineering

New York, USA – 2013 - (planned) 2018  
PhD in Computer Science  
thesis: “Visual Analytics in Predictive Modeling of Medical Data”  
supervised by: Prof. Dr. Enrico Bertini

### University, University of Konstanz

Konstanz, Germany – 2011 - 2014  
Master of Science in Computer Science  
thesis: “Graph Comics: Interactive Staging for Exploring Dynamic Graphs”  
supervised by: Prof. Dr. Oliver Deussen, Prof. Dr. Enrico Bertini

### University, University of Konstanz

Konstanz, Germany – 2008 - 2011  
Bachelor of Science in Information Engineering  
thesis: “Annotation of Changes in Evolving Graphs”  
supervised by: Prof. Dr. Oliver Deussen, Prof. Dr. Ulrik Brandes

## **Employments**

### **Pacific Northwest National Laboratory**

New York, USA – 2016  
summer internship

### **IBM T. J. Watson Research Center**

New York, USA – 2014 and 2015  
summer internships

### **NYU Tandon School of Engineering**

New York, USA – 2013 - (planned) 2018  
research assistant

teaching assistant in courses:

- Information Visualization 2015 - 2016

### **University of Konstanz**

Konstanz, Germany – 2009 - 2013  
research assistant

### **University of Konstanz**

Konstanz, Germany – 2011 - 2012  
teaching assistant in courses:

- Concepts of Computer Science (Bachelor)
- Concepts of Programming (Bachelor)

## Research

### 2016

**Josua Krause, Aritra Dasgupta, Enrico Bertini: “Explanatory Visual Analytics for Enhancing Human Interpretability of Machine Learning Models”**,

*Visualization in Data Science (VDS at IEEE VIS) 2016*

**Josua Krause, Adam Perer, Kenney Ng: “Interacting with Predictions: Visual Inspection of Black-box Machine Learning Models”**,

*Interactive Data Exploration and Analytics (IDEA) 2016*

**Josua Krause, Adam Perer, Enrico Bertini: “Using Visual Analytics to Interpret Predictive Machine Learning Models”**,

*ICML Workshop on Human Interpretability in Machine Learning (WHI) 2016*

**Josua Krause, Aritra Dasgupta, Jean-Daniel Fekete, Enrico Bertini: “SeekAView: An Intelligent Dimensionality Reduction Strategy for Navigating HD Data Spaces”**,

*IEEE Symposium on Large Data Analysis and Visualization (LDAV) 2016*

Anshul Vikram Pandey, **Josua Krause**, Cristian Felix, Jeremy Boy, and Enrico Bertini: **“Towards Understanding Human Similarity Perception in the Analysis of Large Sets of Scatter Plots”**,

*ACM Conference on Human Factors in Computing Systems (CHI) 2016*

**Josua Krause, Adam Perer, and Kenney Ng: “Interacting with Predictions: Visual Inspection of Black-box Machine Learning Models”**,

*ACM Conference on Human Factors in Computing Systems (CHI) 2016*

### 2015

**Josua Krause, Adam Perer, and Harry Stavropoulos: “Supporting Iterative Cohort Construction with Visual Temporal Queries”**,

IEEE Transactions on Visualization and Computer Graphics (TVCG - VAST), Vol. 22, No. 1, pp. 1077-2626, 2015

**Josua Krause, Narges Razavian, Enrico Bertini, and David Sontag: “Visual Exploration of Temporal Data in Electronic Medical Records”**,

Poster Session I of the AMIA Annual Symposium; Poster, 2015

**Josua Krause** and Adam Perer: “**Data-Driven Cohort Construction with Interactive Visual Queries**”,

2015 Workshop on Visual Analytics in Health Care; Demo, 2015

**Josua Krause**, Narges Razavian, Enrico Bertini, and David Sontag: “**Visual Inspection of Longitudinal Electronic Medical Records**”,

2015 Workshop on Visual Analytics in Health Care; Demo, 2015

## 2014

**Josua Krause**, Adam Perer, and Enrico Bertini: “**INFUSE: Interactive Feature Selection for Predictive Modeling of High Dimensional Data**”,

IEEE Transactions on Visualization and Computer Graphics (TVCG – VAST), Vol. 20, No. 1, pp. 1614-1623, 2014

## 2012

**Josua Krause**, Marc Spicker, Leonard Wörteler, Matthias Schäfer, Leishi Zhang, and Hendrik Strobel: “**Interactive Visualization for Real-time Public Transport Journey Planning**”,

Proceedings of SIGRAD 2012 – Interactive Visual Analysis of Data, pp. 95-98, 2012

## Research interests

Visual Analytics, Machine Learning, Information Visualization, Predictive Modeling, Human-Computer Interaction

## Committee Memberships

*Workshop on Visual Analytics in Healthcare (VAHC) 2017*  
web chair