

JONATHAN D. SUEVER, B.S., PH.D.

CONTACT	<i>Email:</i> suever@gatech.edu <i>Tel.:</i> (256) 682-8627 <i>Web:</i> https://suever.com
EDUCATION	Doctor of Philosophy (Ph.D.), Bioengineering Georgia Institute of Technology & Emory University , 2008 - 2013, GPA: 3.83/4.0 <ul style="list-style-type: none">• NSF Graduate Fellow, NIH T32 Trainee, President's Fellow Bachelor of Science (B.S.), Biomedical Engineering and Mathematics University of Alabama at Birmingham , 2004 - 2008, GPA: 4.0/4.0 <ul style="list-style-type: none">• University Honors Program, Engineering Honors Program, <i>summa cum laude</i>
SKILLS	Languages & Technologies <ul style="list-style-type: none">• <i>Languages:</i> Python2/3, Ruby, Go, Node, MATLAB, C, R, C++, Java• <i>Databases:</i> MySQL, SQL Server, DynamoDB, Redis, InfluxDB, MongoDB• <i>Web:</i> Ruby on Rails, Sinatra, JavaScript, Express, React, Flask, WebSocket• <i>Other:</i> Chrome DevTools, Git, Kafka, GRPC, DICOM, Bash, L^AT_EX, Markdown Environments <ul style="list-style-type: none">• <i>Operating Systems:</i> Linux (Debian, Ubuntu, RHEL), Mac OS, Windows• <i>IDEs & Editors:</i> PyCharm, RubyMine, R Studio, vi/Vim, Visual Studio, VS Code• <i>Build & Deploy:</i> Docker, Kubernetes, OpenStack, Packer, Puppet, Terraform
WORK EXPERIENCE	Senior Software Engineer FEB 2019 - PRESENT <i>Tenjin, Inc.</i> , San Francisco, CA (based in Atlanta, GA) <ul style="list-style-type: none">• Performed migration of entire legacy infrastructure to Kubernetes (EKS and GKE)• Replaced legacy Ruby components with high-performance Go/GRPC microservices• Drove code quality and development velocity initiatives through critical code review, Jira task management, static code analysis, and automation via CI/CD• Worked closely with a team distributed across Europe, Asia, and the United States Software Engineer MAY 2017 - JAN 2019 <i>Rigor, Inc.</i> , Atlanta, GA <ul style="list-style-type: none">• Developed a Google Chrome synthetic testing agent complete with CI/CD and QA processes required to support Chrome's rapid release cycle and ensure accurate data• Added cellular network emulation to our agents via the Linux networking stack• Converted agent infrastructure to support Docker containers running on-premises• Instrumented our agents to monitor health, performance, and cost in real-time• Significantly reduced S3 costs by optimizing storage class, and data compression/access Research Scientist I JAN. 2015 - APR. 2017 <i>Cardiac Imaging Technology Lab, Geisinger Health System</i> , Danville, PA <ul style="list-style-type: none">• Developed HIPPA-compliant applications for managing imaging studies and analyses• Engineered a solution to provide de-identified access to clinical data for research• Utilized computer vision to derive measures of cardiac function from routine MRIs• Mined 15 years of longitudinal clinical data to classify patients and predict outcomes• Worked with IT Compliance to meet technical Research needs and remain compliant• Served as Systems Administrator for all servers and applications used by the group Research Assistant Professor JUL. 2014 - DEC. 2014 <i>Cardiac Imaging Research Lab, University of Kentucky</i> , Lexington, KY <ul style="list-style-type: none">• Combined continuum mechanics and image processing to develop a robust pipeline for processing 3D displacement-encoded MRI data to assess heart function• Created methodology for validating <i>in-vivo</i> measurements of cardiac displacements• Released open source tools for analysis of displacement-encoded MRI data Post-Doctoral Scholar JUL. 2013 - JUN. 2014 <i>Cardiac Imaging Research Lab, University of Kentucky</i> , Lexington, KY <ul style="list-style-type: none">• Developed a comprehensive image processing tool used daily by all lab members• Worked closely with graduate students to understand the physics behind displacement-encoded MRI acquisitions and optimize parameters for all imaging studies• Utilized advanced image processing and image acquisition techniques to answer clinical questions pertaining to pediatric obesity and congenital heart disease

<p>WORK EXPERIENCE (CONTINUED)</p>	<p>Image Processing Consultant MAR. 2013 - JUL. 2013 <i>Scientific Imaging and Visualization, LLC, Atlanta, GA</i></p> <ul style="list-style-type: none"> • Developed and implemented algorithms for automated tracking of cardiac motion • Designed and delivered a custom user interface for visualizing cardiac motion <p>Independent Web Developer JAN. 2013 - PRESENT</p> <ul style="list-style-type: none"> • Created websites and custom web applications for individuals and businesses • Managed deployments on both shared hosting and virtual private servers • Utilized search engine optimization to improve site visibility <p>Graduate Research Assistant JUL. 2008 - JUL. 2013 <i>Georgia Institute of Technology & Emory University, Atlanta, GA</i></p> <ul style="list-style-type: none"> • Created a novel method for analyzing MR images of the heart to detect dyssynchrony • Automatically aligned 2D X-ray images and 3D MR images of the coronaries and performed validation using a custom 3D-printed coronary vein phantom • Conducted a clinical study to determine the effect of scar tissue, mechanical dyssynchrony, and coronary vein anatomy on patient response to pacemaker therapies • Helped to create a robust method for registering longitudinal IVUS datasets • Employed PDE-based image processing techniques to characterize mouse plaques • *Served as a technical and scientific mentor for three undergraduate researchers <p>Teaching Assistant - Capstone Design JAN. 2010 - DEC. 2010 <i>Department of Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA</i></p> <ul style="list-style-type: none"> • Mentored 16 groups in the design, prototyping, and testing of biomedical devices • Provided constructive feedback on project reports and 510(k) submissions <p>Undergraduate Research Assistant JAN. 2007 - JUL. 2008 <i>University of Alabama at Birmingham, Birmingham, AL</i></p> <ul style="list-style-type: none"> • Designed and performed computational molecular dynamics simulations to study the interaction of key proteins involved in the apoptotic pathway of osteoclasts using an IBM Blue Gene supercomputer.
<p>THESES</p>	<p>Ph.D. Dissertation (2013) - MRI Methods for Predicting Response to Cardiac Resynchronization Therapy</p> <ul style="list-style-type: none"> • Designed the methods and software required to assess scar burden, mechanical dyssynchrony, and coronary vein anatomy in the heart from MRI images and studied the effect of these various factors on patient response to biventricular pacemakers. <p>B.S. Honors Thesis (2008) - Conformation and Free Energy Analyses of the Complex of Ca²⁺-Bound Calmodulin and the Fas Death Domain</p> <ul style="list-style-type: none"> • Performed molecular dynamics simulations to characterize the interactions between mutated versions of two proteins that are crucial in regulating bone density.
<p>AWARDS</p>	<ul style="list-style-type: none"> • <i>Society of Cardiovascular MRI</i>, Regional Scholarship, 2014. \$1,000 • <i>National Science Foundation</i>, Graduate Research Fellowship, 2010 - 2013. \$90,000 • <i>Georgia Institute of Technology</i>, President's Fellowship, 2008 - 2012. \$20,000 • <i>University of Pittsburgh</i>, Mr. & Mrs. Kwok-Chong Woo Grant, 2007. \$5,000 • <i>Univ. of Alabama at Birmingham</i>, Jane Knight Lowe Scholarship, 2004 - 2008. \$40,000
<p>PROFESSIONAL DEVELOPMENT</p>	<ul style="list-style-type: none"> • Open Source Developer: <i>MATL-Online</i> (creator, 2015), <i>DENSEanalysis</i> (development lead since 2014), <i>pydicom</i> (contributor since 2012), <i>DICOMSort</i> (creator, 2011) • Community Contributor - 2015 - Present: <i>Stack Overflow</i> (<i>stackoverflow.com</i>) • Reviewer - 2015 - Present: <i>Journal of the American College of Cardiology: Cardiovascular Imaging</i>, <i>Journal of Cardiovascular Magnetic Resonance</i>, <i>Nuclear Magnetic Resonance in Biomedicine</i> • Programming Book Reviewer - 2013 - Present: <i>Manning Publications, Co.</i> • Social Chair - 2011 - 2012: <i>Bioengineering and Bioscience Unified Graduate Students</i> • Member - 2008 - Present: <i>International Society for Magnetic Resonance in Medicine</i> • Member - 2008 - Present: <i>Society for Cardiovascular Magnetic Resonance</i> • Webmaster - 2007 - 2008: <i>UAB Undergraduate Student Government Association</i> • Webmaster - 2005 - 2008: <i>Habitat for Humanity, UAB Chapter</i>