



ERIK BUTCHER

CAMBRIDGE, MASSACHUSETTS

CONTACT


 980-221-5646

 butcer@alumni.wfu.edu

 Harvard Square, Cambridge
Massachusetts

 linkedin.com/in/erik-butcher

 github.com/butcer0

 researchgate.net/
profile/Erik_Butcher2

EDUCATION

MASTERS | BIOENGINEERING
Harvard University
Cambridge, MA
2018 – Present

CISSP CERTIFICATION
Wake Forest Business School
Charlotte, NC
2017

BACHELORS | BIOLOGY
Wake Forest University
Winston-Salem, NC
2010 – 2014

INTERNATIONAL BUSINESS
Universität Mannheim
Mannheim, Germany
2010 – 2011

PROFESSIONAL SUMMARY

A dedicated and enthusiastic computer scientist experienced in managing and programming on various platforms and operating systems. A flexible, highly organized individual with the proven ability to adapt and react quickly in a high pressure, fast-paced environment. Possesses practical knowledge in recombinant genomics, data analytics, and several microscopy techniques. Excellent communication and presentation skills, with demonstrated success as a team player, and with the commitment and discipline to work well independently.

PROFESSIONAL EXPERIENCE

SENIOR SOFTWARE ENGINEER

Payfactors | Greater Boston Area | July 2018 – Present

"Payfactors is a full suite of cloud-based compensation data management tools, built using revolutionary technology. Our collaborative solution puts you and your team at the center of it all. We get rid of the manual processes that eat up all your time and integrate all your data and survey sources into one simple, seamless spot." – Payfactors

- Leadership: Scrum Master, Architecture, Code Standards
- Server Technologies: IIS, .NET MVC, Web API, Elasticsearch, SQL Server (T-SQL), Mongo, Microsoft Azure, DACPAC, RedGate SQL Source Control
- Client Technologies: Angular2+ (Javascript, Typescript, HTML, SCSS, NGRX Redux, RxJS, Webpack), AngularJS, Classic ASP
- CI/CD: Git, TeamCity, Jenkins, Jira, Confluence, Octopus Deploy, GitKraken

DEVELOPMENT LEAD, SENIOR APPLICATION ARCHITECT

Emporos Systems Corporation | Charlotte, NC | Dec 2014 – Jun 2018

- Implemented asynchronous architectures in existing WPF Desktop and mobile applications central to expediting fulfillment of patient pharmaceuticals with government compliance orchestration and UI layer responsiveness optimization leveraging C++ performance layers.
- Integrated continually growing collection of PCI Certified RESTful payment processing and healthcare APIs with Subject Pattern focus and Unity Dependency Injection (IoC).
- Mentored developers and teams, established coding standards and best practices for development, version control, and deployment processes.
- Met with leadership, project managers, and stakeholders for epic and sprint planning in an Agile environment.

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SKILLS

➤ TECHNICAL

- Leading Large-Scale Architecture
- Managing Scrum Team
- Establishing Engineering Code Standards
- Nascent Technology Prototyping for Stakeholders
- .NET Technologies
- Modern Javascript Frameworks with Redux
- HTML, CSS, SASS
- CI/CD Automation
- AI Driven Microsecond Response Full-Text Search Technologies
- Cloud Technologies
- Asynchronous Patterns
- 2-Way Push Technologies
- Big Data Analysis
- Compiling Statistics
- Relational and Non-Relational Datastore Technologies
- Database Schema and Data Management
- Quantitative Reports
- Information Technology
- Adobe Illustrator
- Adobe Photoshop
- In Silico, In Vivo, In Vitro Cellular and Molecular Biology
- Fluorescence Microscopy

EXPERIENCE CONTINUED...

DEVELOPMENT LEAD / APPLICATION ARCHITECT

Elite Team Technology | Charlotte, NC | Jan 2013 – Dec 2013

- Developed custom web applications integrating into suite of multi-tenant Property Management solutions for Elite Team Technology clients in Azure Cloud.
- Lead greenfield ASP.NET client-specific solutions to ongoing specification leveraging cloud-based worker and data store technologies.
- Spearheaded internship program at Wake Forest University allowing students to emerge into the world of enterprise-scale, multi-tenant web technology, and gaining invaluable industry experience.

TEAM LEAD / DEVELOPER

Mirrus Corporation | Winston-Salem, NC | Aug 2011 – Sep 2012

Architected and developed solutions to support proprietary remote digital advertising mirror technologies in .NET, HTML, Javascript.

- Instrumental in integrating recording and reporting ability to record and report consumer engagement in real time.
- Engineered USB rubber-duddy solutions for rapid in-production hardware initialization, debugging, repair, and updates.

NEUROSCIENCE BIOINFORMATICS RESEARCHER

Wake Forest Medical School | Winston-Salem, NC | Aug 2010 - May 2011

Worked with director of neuroscience, Dr. Godwin and team to develop MEG Brain Imaging Suite software platform ingesting data from the medical school's MEG brain imaging machines analyzing real patient brain data streams for three-dimensional rendering and interactive color map simulation of neural activity occurring in the patient's brain.

- Data ingestion and orchestration via MATLAB.
- Solutions optimized with C# XNA graphics engine for rapid ball-inclusion tissue layer stratification and billboard optimization to minimize computations space.

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CERTIFICATIONS

- Certified Information Systems Security Professional
- Veracode Security Certification
- HIPAA Certified
- Bloodborne Pathogen and Infectious Disease Trained
- Certified Medical Scribe

AWARDS

HARVARD HEALTH
INNOVATION NETWORK
SCIENCE SLAM 2019
SPEAKING AWARD
Cambridge Science Festival and
Mass General Research Institute

CHANCELLORS
AWARD (4.0)
Wake Forest University |
Harvard University

DEANS LIST (3.8)
Wake Forest University

REFERENCES

#AVAILABLE ON REQUEST



Facebook.com/erik.butcher.3



twitter.com/butcer0



butcer0

RECENT PUBLICATIONS

AN AUTOMATED QUANTITATIVE IMAGE-PROCESSING PIPELINE FOR
EXTRACTION OF MITOCHONDRIAL FEATURES IMPORTANT IN
OCULAR FIBROSIS

Authors: Erik Butcher^{1,2}, Daisy Y. Shu¹, Siwei Cai¹, Ilakya Senthilkumar¹,
Scott Frank¹, Magali Saint-Geniez¹

Affiliations: ¹Schepens Eye Research Institute, Mass Eye and Ear, Harvard
Medical School, ²Harvard John A. Paulson School of Engineering and
Applied Sciences, Harvard University

MITOCHONDRIAL NETWORK ANALYSIS OF RETINAL CELLS VIA
AUTOMATED IMAGE SEGMENTATION FOR MULTIPARAMETERIC
QUANTITATIVE PROCESSING

Authors: Erik Butcher^{1,2}, Daisy Y. Shu¹, Siwei Cai¹, Ilakya Senthilkumar¹,
Scott Frank¹, Magali Saint-Geniez¹

Affiliations: ¹Schepens Eye Research Institute, Mass Eye and Ear, Harvard
Medical School, ²Harvard John A. Paulson School of Engineering and
Applied Sciences, Harvard University

MOLECULAR CONTROL OF RPE METABOLIC DYSFUNCTION IN
ADVANCED AMD

Authors: Magali Saint-Geniez¹, Siwei Cai¹, Daisy Y. Shu¹, Erik Butcher¹,
Ilakya Senthilkumar¹, Scott Frank¹

Affiliations: ¹Schepens Eye Research Institute, Mass Eye and Ear, Harvard
Medical School, ²Department of Cell Biology, Harvard Medical School

METABOLIC ALTERATIONS DURING TGF β 2-INDUCED EMT IN RETINAL
PIGMENT EPITHELIAL (RPE) CELLS

Authors: Daisy Y. Shu¹, Erik Butcher¹, Siwei Cai¹, Ilakya Senthilkumar¹,
Scott Frank¹, Kiran Kurmi², Magali Saint-Geniez¹

Affiliations: ¹Schepens Eye Research Institute, Mass Eye and Ear, Harvard
Medical School, ²Department of Cell Biology, Harvard Medical School

PGC1- β PROMOTE RPE OXIDATION DAMAGE AND CHOROID
SPROUTING

Authors: Siwei Cai¹, Daisy Y. Shu¹, Erik Butcher¹, Ilakya Senthilkumar¹,
Scott Frank¹, Magali Saint-Geniez¹

Affiliations: ¹Schepens Eye Research Institute, Mass Eye and Ear, Harvard
Medical School