### Gary Milam Jr.

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# Education

**Masters of Science in Biomedical Engineering,** The George Washington University January 2022

* **Relevant Coursework**: Pattern Recognition & Machine Learning, Digital Image Processing, Cell and Molecular Imaging, Intro to Medical Imaging

**Bachelor of Science in Electrical Engineering**, University of Illinois Urbana, Champaign, IL. May 2007

Minor in Business Administration & Computer Science

# Research Projects

**Assistive Robotics and Tele-Medicine (ART-Med)**, The George Washington University 03/2020 – 05/2022

**Research Assistant / Research Engineer**

**Automated Nerve Identification**

* Developed framework for raw data processing, pre-processing and neural network inference providing a viable real time solution for automated nerve detection during intraoperative surgery
* Ported image processing code from CPU to GPGPU implementation, using CUDA kernels, achieving processing gains upwards of 140x
* Build a configurable training framework for single and multi-modality U-Net and U-Net variants with distributed parallel data training in Pytorch
* Assisted in designing a multi-modal deep learning network for nerve detection
* Improved an image masking program to assist and ease ground truth annotation

**Trainable EKF for Dead Recknoning**

* Optimized Python code to successfully run multiple inference modules on a Jetson AGX Xavier Developer Kit, publishing localization predictions at 99HZ+
* Investigated different neural network models to improve EKF localization, including CNNs and RNNs

# Technology

**Programming Languages:** Python, Java, SQL, MATLAB | **Deep Learning Frameworks:** PyTorch

**Programming Libraries:** OpenCV, NumPy, PyCUDA, Pandas, Scikit-Learn, Matplotlib, Seaborn, Pillow, Albumentations,

**Relational Databases:** PostgreSQL, MSSQL, MYSQL | **NoSQL Databases**: Datastax

**Frameworks/Tools:** Git, ROS, ONNX, ONNX Runtime, Jupyter Notebook, Hibernate, Log4j, Junit

**Operating Systems:** Ubuntu, RedHat Linux, CentOS, UNIX, Windows

# CERTIFICATIONS and Other

**Machine Learning Engineering for Production,** Deeplearning.Ai, Coursera Specialization, Ongoing

**AI for Medicine,** Deeplearning.AI, Coursera Specialization, 2020

**Deep Learning,** Deeplearning.AI, Coursera Specialization, 2020

**Machine Learning,** Stanford University, Coursera, 2019

**Languages**: English, Spanish (Fluent)

# Awards

**2022 GW Technology Commercialization Innovation Competition** 04/06/2022

**Poster Presentation: *“AI-Driven Real-time Nerve Detection and Visualization for Surgical Precision”***

\*Winner of the audience choice award

# Professional Experience

**Itviti (formerly CameronTec),** Chicago, IL 1/2017 – 1/2019

***AVP Infrastructure & Connectivity, Engineering***

* Retained and promoted following acquisition of CameronTec; manage team of 6-7 software engineers
* Highly focused on development and rollout of the FIX infrastructure and support related activities
* Oversaw cross-functional team during testing, development, implementation and support of fully managed FIX connectivity platform delivered as a service
* Provided maintenance and support of entire FIX infrastructure including FIX engines, web application and back-end software
* Managed the development of web application providing customers with access to view unique FIX traffic flow in both real-time and historical context; solution provides analytic information of the day’s trading and status of FIX engines
* Managed remote and on-site development & support teams across the Americas using agile/scrum methodology

**CameronTec Group (formerly Greenline Financial),** Chicago, IL 5/2015 – 1/2017

***Support Manager/Senior Software Engineer*** *(1/2016 – 1/2017)*

* Promoted to manage support team for all of the Americas region; team maintained minimal 95% customer satisfaction rate during tenure
* Directed cross-functional, diverse team providing support for all flagship products; created a performance-driven team culture using agile scrum methodology
* Managed client expectation for upcoming product versions & critical issue resolution; led code reviews & weekly calls

***Senior Sales Engineer****, (5/2015 – 1/2016)*

* Retained and promoted to sales role following acquisition of Greenline; served as technical subject matter expert (SME) during sales process for all legacy Greenline products and CameronTec flagship products including Cameron & Catalys FIX Engine
* Owned bug fixing and features problem solution strategy for the Catalys FIX Engine flagship product
* Managed all complex and escalated support requirements and issues

**Greenline Financial Technologies,** Chicago, IL 7/2007 – 5/2015

***Integration Manager, Americas****, (1/2013 – 5/2015)*

* Worked cross-functionally with the sales team to expand operations into Latin America (LATAM)
* Contributed to pre-acquisition strategy by building partnerships in LATAM; gained the Mexico Stock Exchange as a client; retained strategic clients including the Colombia Stock Exchange (BVC), Peru Stock Exchange (BVL); retained Santiago Stock Exchange (SSE) since 2010 and FINAMEX, a Mexico brokerage house, since 2012
* Contributed to the successful defense of $15M in annual revenue

***Senior Integration Specialist****, (1/2011 – 1/2013)*

* Supported sales strategy by conducting technical product demonstrations for new and existing customers
* Managed the proof of concept lifecycle, from ideation to handoff
* Evaluated legacy customer environments and delivered solutions based on product portfolio & needs assessment
* Served as escalated customer solutions manager; performed customer walkthroughs, onsite debugging, updates, patches, and on-site, customer-facing training; additional remote & onsite support during complex deployments