

Gregory Fiumara

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Objective

Seeking a computer scientist position in which professional experience in software engineering with a focus on biometrics and identity management will enhance an organization's efficiency in achieving its goals, both short and long-term.

Experience

National Institute of Standards and Technology (NIST) · *Computer Scientist* · Gaithersburg, MD 06/18–Present

- Lead NIST's involvement in Intelligence Advanced Research Projects Activity (IARPA)'s Nail-to-Nail Challenge (N2N). Developed fingerprint capture software using various fingerprint device software development kits (SDKs), prepared institutional review board (IRB) protocols, designed C++ application programming interfaces (APIs) and wrote corresponding test drivers, performed data analysis in R and Python, presented results in public reports and conferences. Oversaw financial assistance awards. Assisted in interagency experiment design and communication with participants.
- Spearheaded public biometric data distribution initiative, *Special Database Series 300*. Lead team through human subjects protection, privacy, and legal reviews, presented at conferences, and developed a Python web app for distribution.
- Lead Minutia Exchange (MINEX), the world-recognized evaluation of interoperable minutia template (ANSI/INCITS 378) generation and matching, supporting certification for the United States Government (USG)'s Personal Identity Verification (PIV) program. Performed development, experiment design, data analysis, and report generation.
- Lead Proprietary Fingerprint Template (PFT), NIST's test of 1:1 proprietary fingerprint template matching. Performed development, experiment design, data analysis, and report generation.
- Biometrics subject matter expert for USG's 2019 revision of PIV, FIPS 201-3.
- Co-developed Biometric Evaluation Framework, a collection POSIX-compliant C++ classes simplifying biometric technology evaluation test driver code for rapid results. Significant hierarchies include parallel processing, image/video/biometric format parsing, storage abstractions, safe memory management, and more. Project was recipient of a 2014 Department of Commerce Silver Award, and was presented at both BTAS 2015 and CppCon 2016.
- Co-authored API, test driver, and final report of FpVTE, NIST's distributed large-scale 1:N fingerprint evaluation.
- Served as mentor to college student trainees in software engineering and biometrics.
- Assisted in administration of Linux/Windows blade clusters, Cisco Ethernet switches and fibre directors, and multi-hundred terabyte StorNext and NFS parallel file systems.

Gregory Fiumara · *Sole Proprietor* · Gaithersburg, MD 01/10–Present

- Developed iOS apps. Most notably *Tappd That*, a well-reviewed Untappd client for Apple mobile devices.
- Regularly participated in developer circles including GitHub and Stack Overflow.

Education

Coursera.com 10/18–Present
Machine learning and artificial intelligence coursework, toward new NIST focus areas.

National Institute of Standards and Technology · Gaithersburg, MD 08/14–11/15
Foundations of Leadership Program and *Project Management Leadership Program* graduate.

Johns Hopkins University · Baltimore, MD 09/10–08/12
MS computer science, with honors. 4.0 GPA.

University of Maryland, Baltimore County: An Honors University · Baltimore, MD 08/06–12/09
BS computer science, cum laude. Certificate of general honors. Honors College graduate. 3.72 GPA.

Skills and Tools

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| Daily | macOS, Linux (CentOS/Red Hat, Ubuntu), UNIX derivatives (FreeBSD). bash, C, C++, R (tidyverse, ggplot2), Objective-C (CocoaTouch). BBEdit, vim, Xcode. clang, gcc, git, Perforce. |
| Monthly | Windows. L ^A T _E X/TikZ, Python. Eclipse. icc. Apache. |
| Occasionally | C#, Java, Swift. |