

# Karen "Nicky" Nix

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## Summary

Current PhD student offering 13+ year career in information technology, web development and geographic information services. Quickly learn and master new technologies, successful working in both team and self-directed settings.

## Education

Auburn University - Auburn, AL, Samuel Ginn College of Engineering

**Pursuing Doctorate of Philosophy in Computer Science & Software Engineering,**

Expected Graduation: May 2023

- Relevant Coursework: Special Topics in Cloud Computing, Advanced Computer Architecture, Advanced Operating Systems, Special Topics in iOS App Development, Advanced Topics in Algorithms

Columbus State University – Columbus, GA

**Master of Science in Computer Science, Software Development,** Graduated: December 2012

- Courses Completed: Computer Networks, Computer Architecture, Contemporary Issues in DB Main Systems, Web Site Development/Technology, Human Computer Interface Development, Enterprise Web Application Development, Software Test & Quality Assurance, Programming Languages, Object-Oriented Development w/ Components, Advanced Database Systems, Selected Topics in CSCI – Study Abroad: Tokyo Japan, Computer Graphics

LaGrange College – LaGrange, GA

**Bachelor of Arts in Computer Science,** Graduated: May 2007

## Industry Experience

City of LaGrange – LaGrange, GA

**Web Developer/Designer/GIS Supervisor,** February 2013 to December 31<sup>st</sup>, 2020

Promoted to Web Developer/Designer to assist an IT team in developing/maintaining software applications as well as overseeing the activities of a GIS subordinate to accomplish geographic information services goals.

- Responsible for working on responsive web-based applications, website enhancements, database-backend websites and website layout enhancements for city and county government as well as nonprofit organizations.
- Write code using SQL, C#, JavaScript, iOS/Swift, PHP. Work with Web & .NET prog languages utilizing an IDE, Visual Studio and applying scripts: JavaScript, jQuery plugins and more.
- Design of web graphics utilizing Adobe Creative Cloud products: InDesign, Lightroom, Photoshop, Illustrator, etc.
- Develop e-mail HTML templates, email marketing (MailChimp, ConstantContact, etc.), social media and web analytics.
- Maintain and configure SQL and MySQL databases. Administration of MySQL handled over the web with the phpMyAdmin tool; Administration of SQL handled within the Business Intelligence Development Studio (BIDS) tool.
- Responsible for delivering comprehensive GIS services to departments and divisions in support of departmental GIS needs. Provides GIS needs. Provides overall management of joint resources, long range planning, coordination of activities among participating departments, including database design and maintenance, map design, data digitizing; attribute collection; administering database structures, programming; project analysis; developing processing and documentation standards.
- Oversees the activities of GIS subordinate working toward accomplishment of goals; understands, demonstrates and explains the mission, roles, policies, and function and addresses concerns regarding GIS programs and specific customer issues.

- Performs GIS software updates and maintenance of ESRI server. Setup and maintain online GIS maps through ESRI server.
- Collects or oversees counter sales of maps and data, address assignment applications, etc.
- Led GIS Steering Committee to select vendor for Troup County, GA aerial flyover. Successfully produced a RFP and secured bid. Flyover complete February 2020; note: first flyover in eleven years.
- Write code for iOS and Android platforms; creation and development of iOS and Android app, CityLG in 2014. Made available in iTunes and Google Marketplace. Interview available, [https://www.youtube.com/watch?v=0\\_Qfw99Yn8s](https://www.youtube.com/watch?v=0_Qfw99Yn8s)
- Create SQL reports, mining from multiple databases.
- Setup and maintain web server and applications; Microsoft IIS
- Install and maintain SharePoint servers.
- Maintain Windows servers and virtual machines.
- Manage web domains.
- Interact with active directory domains and exchange servers daily.
- Experience with Roku App development utilizing the Brightscript, scripting language in the Eclipse IDE.

City of LaGrange – LaGrange, GA

**MIS Technician II/Webmaster**, 2009 to 2013

**MIS Technician I**, 2007 to 2009

Promoted to management information systems technician II to assist an IT team in configuring troubleshooting and maintaining a Windows infrastructure.

- Provide hardware and software support.
- Write code such as HTML, SQL, C#, Java, JavaScript, iOS/Swift, PHP.
- Maintain Government website in Adobe Dreamweaver IDE and Facebook.
- Perform troubleshooting and provide end-user support.
- Resolve users' system problems & queries.
- Network & software
- Maintain Windows servers
- Interact with Active Directory domains and Exchange servers daily.

## Course Projects

Auburn University - Auburn, AL

**Implement CP/M File System Project**, Jan-Apr 2019

- Linux

*Project Scope:* Design and implement a simple file system (i.e., CP/M file system). Note: a CP/M, Control Program for Microcomputers is a disk-based operating system for 8-bit computers and had become the most popular operating system in the mid-1970s. Development of a stand-alone program (a simulate file system) written in the C programming language that allows users to list directory entries, rename/copy/delete files, as well as code to read/write/open/close files.

*Tools:* cp/m, ansi-c-compiler, unix, c, img, vi

Auburn University - Auburn, AL

**Cloud Computing Project**, Jun-Aug 2017

- Linux System Admin/OpenStack (Centos)

*Project Scope:* Setup multiple virtual machines in OpenStack to be used to emulate a server center environment, including NAT, DNS, NTP, IPTables, and Passwordless SSH. (OpenStack) Set up virtual networks, routers, security groups, ssh key pairs, virtual machines (horizon and cli). (Centos) Set up NAT, DNS, NTP, docker, bridges, veth-pairs, and opened appropriate ports via iptables.

*Tools:* named, ntpd, iptables, bridge-utils, ip, ifconfig, vi, docker, ceph, Kolla-Ansible, CentOS, OpenStack

## Technology Skills

- *Web Technologies & Frameworks & Languages:* HTML5, CSS, ASP.NET, PHP, MVC, C#, C, BrightScript
- *IDE:* Visual Studio, Eclipse, Notepad ++, Jupyter Labs, Adobe Dreamweaver
- *Databases:* MySQL, Microsoft SQL Server
- *Scripts/UI:* JavaScript, jQuery, AJAX, Bootstrap, Arcade
- *Web Debug Tools:* Chrome developer tools, Fiddler, Visual Studio Debugging tools

- *Application/Web Server*: IIS
- *Versioning and other tools*: GitHub, Google Search Console, Google Analytics, Google Business, Google MarketPlace, Apple Developer, Roku Developers, FaceBook for Developers
- *Deployment Tools*: Microsoft Deployment Toolkit, Docker
- *Servers*: VirtualBox, VMWare, physical, Microsoft Azure
- *Cloud Platforms (PaaS)*: Microsoft Azure, IBM Bluemix
- *SharePoint*: SharePoint 2013, SharePoint 2016 and add'l tools such as SharePoint Designer & Microsoft InfoPath
- *CMS & Graphic Editors*: WordPress, Drupal, Adobe Creative Cloud, Canva
- *ESRI ArcGIS Products*: Enterprise (Server), Desktop, Portal, Web AppBuilder, Silverlight/JavaScript/Python API, Collector, Connect for Survey123, Field Maps, ArcGIS Online
- *Additional Skills*: Microsoft Office, Exchange, and activity directory

## Certifications

- ESRI certified in ArcGIS for Server: Sharing GIS Content on the Web
- ESRI certified in Building Web Applications Using the ArcGIS for Silverlight & JavaScript API
- Accelebrate certified in Response Web Design with Bootstrap; HTML5, CSS3, & JavaScript
- Learning Tree International certified in Building SharePoint Server Enterprise Solutions
- GCIC Security Awareness Training

## Seminars & Workshops

- Los Alamos National Laboratories-Virtual, *Cyber Boot Camp*, January 2021  
*Tools*: VMware, Jupyter Labs, Volatility 2 & 3, Rekall, Winpmem, Autopsy 416 with python plugins, Eric Zimmerman's tools, CyberChef, Ghidra, FTK Imager, Sysinternals, Love
- ESRI User Conference 2020-Virtual, *Interconnecting our World*, July 2020
- ESRI Southeast User Conference 2018-Charlotte, NC, *Inspiring What's Next*, August 2018
- ESRI User Conference 2017-San Diego, CA, *The Science of Where*, July 2017
- ESRI User Pre-Conference 2017 Workshop-San Diego, CA, *Making Great Maps*, July 2017
- ESRI The ArcGIS User Seminar-Atlanta, GA, *Getting the Most Value from Your ArcGIS*, February 2017
- Government Social Media Conference-Dallas, TX, *#GSMCON*, April 2016
- ESRI Developer Summit 2016-Palm Springs, CA, *Enabling a Smarter World*, March 2016

## Organizations

- Society of Women Engineers, 2017 - Present

## Honors & Awards

- 2021 ESRI Special Achievements in GIS – In Progress, Reviewing
- Georgia State University-Virtual, *Evidence-Based Cybersecurity Research Group Mentorship Program*, Summer 2021 – In Progress, Reviewing