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# **Technical Skills**

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| ***GIS Software*** | ArcGIS Desktop, ArcSDE, ArcGIS for Server, ArcGIS Online, QGIS, GeoServer, Synergi Gas |
| ***Software*** | Crystal Reports, Jira, Confluence, Balsamiq Mockups, Microsoft Office |
| ***Languages*** | Python, SQL, JavaScript, HTML, C# |
| ***Web Frameworks*** | ASP.NET MVC, Dojo, JQuery, Bootstrap, Kendo UI, ArcGIS JavaScript API, Flask |
| ***IDEs*** | Visual Studio, Eclipse, Toad for Oracle |
| ***Version Control*** | Git, GitHub, Team Foundation Server |
| ***Databases*** | Oracle, PostgreSQL, PostGIS, SQL Server |
| ***Operating Systems*** | Microsoft Windows & Windows Server, Linux Red Hat |
| ***Cloud Technology*** | Microsoft Azure, Google Cloud Platform |

# **Project Experience**

**New York City – Department of Education – Open Source Technology Proof of Concept | 2017**

* Developed a prototype web mapping application as a Proof of Concept using Open Source technology as a contingency plan if the city’s contract with ESRI did not get renewed.
* Used GeoServer to link to a SQL Server Spatial database to publish layers, OpenLayers to consume the OGC WMS and WFS services in a web application and Turf.JS to perform analysis operations.
* Developed a report where I published the technology, methods and findings of the Proof of Concept
* **Technologies Used: GeoServer, QGIS, SQL Server, OpenLayers, Turf.JS**

**Fieldbook - Web Map Editing Tool | 2016**

* Developed a web mapping editing component that allowed users to perform CRUD operations through ArcGIS REST services to update spatial data stored on an enterprise Oracle SDE database.
* Tool was used for updating data for a $1 billion pipeline construction project spanning over 100 miles.
* Incorporated audit tracking and role base functionality in order to control changes in the application.
* **Technologies Used: ArcGIS for Server, Visual Studio, ASP.NET, JavaScript and Oracle**

**Qatar Ministry of Transport – Pedestrian Crossing Network Model | 2016**

* Worked in Qatar with the Ministry of Transport to develop a GIS network model to find suitable locations to build pedestrian crossings across the entire country.
* Analysis was related to an infrastructure improvement project to accommodate the high volume of people expected for the upcoming 2022 FIFA World Cup.
* Worked as a GIS developer to analyze a road network and assist with the development of a network model and data visualization tool.
* **Technologies Used: ArcGIS, ArcObjects, Visual Studio, C#, Python**

**Eastern Shore Natural Gas - Pipeline Risk Model | 2013**

* Managed the creation of a geospatial risk model for a natural gas pipeline system spanning two states that determined which pipe segments in their system have the highest probability of failing.
* Collaborated with subject matter experts to develop formulas to calculate the probabilities of failure.
* Analyzed data for the calculations, ranging from a variety of factors such as pipe segment features, soil data analysis and field survey reports.
* **Technologies Used: Oracle, ArcGIS**

**New York City - Metropolitan Transit Authority - East Side Access Project | 2009 - 2010**

* Worked on a tunnel construction project worth over $10 billion that would allow trains from Long Island, NY a direct route into Grand Central Station.
* Collected data from construction shifts and tunnel boring machines (TBM) to assess utilization.
* Worked as a database specialist to make sure data was being integrated correctly into my company’s tunnel information management system.

**Technologies Used: Oracle**

**New Jersey Department of Transportation - Emergency Management Application | 2015**

* Developed a web mapping application that allowed users to track damage during natural disasters across the state of New Jersey.
* Designed functionality to add work orders in the field, upload photos to a file server through AJAX requests and capture spatial coordinates.
* **Technologies Used: ArcGIS for Server, Visual Studio, ASP.NET, JavaScript**

# **Work Experience**

**New York City – Department of Education** – GIS Developer | 2017

* Developed and maintained spatial datasets and applications for the New York City school system, consisting of over 1,800 schools and 1.1 million students.
* Maintained an ASP.NET MVC web application, ArcGIS map services and automated GIS tasks using Python.
* Created technical documents, supported other departments with GIS services and conducted training.
* Maintained MTA subway and bus data to analyze distances of stops for all schools and childhood centers.

**Mott MacDonald** -GIS Architect & Developer | 2007 – 2017

* Administered a production GIS Server environment for approximately 25 clients.
* Worked on migrating GIS servers into an enterprise Microsoft Azure Cloud environment.
* Developed Python scripts for a variety of uses such as FTP image transfer, spatial analysis, creating map books from data driven pages and developing geoprocessing services.
* Developed an ASP.NET MVC mapping application that played a pivotal role in acquiring new clients.
* Worked with the development team to architect a document management system that links documents to spatial assets in a web based GIS application.
* Architected tools using Kendo UI widgets, JQuery, Bootstrap and the ArcGIS JavaScript API that allowed clients to view, edit, search and analyze their assets spatially in a web mapping application.

**Rutgers University** -Assistant Professor | 2011

* Taught a course on Java programming fundamentals covering object oriented concepts such as classes, inheritance and abstraction.
* Program was part of a certification for veterans of the wars of Iraq and Afghanistan that provided them tools to start a career in the Information Technology field.

**Essex County College** -Assistant Professor | 2009

* Taught a course that was part of a GIS certificate program covering analysis techniques using ArcGIS Desktop and the Spatial, Network and 3D Analyst extensions.

**County of Union, NJ** - GIS Technician | 2005 – 2007

* Designed maps for different County departments, ranging in uses from evidence in court trials where I served as an expert witness, to public County Park web maps using Adobe Illustrator.
* Supported various County departments with assistance using the ArcGIS software suite.

# **Education**

**Oregon State University** - Geographic Information Science, Graduate Certificate

**Kean University** – Computer Science, Bachelor of Science