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## SUMMARY OF QUALIFICATIONS

- More than 8 years of experience in C#
- Approximately 3 year of experience with SQL server / Oracle RDBMS
- Developed both standalone applications with ESRI support and ArcMap plugins/toolbars
- Experience with Microsoft products: HTML5, CSS, MVC
- Experience with XML serialization/deserialization
- Experience with Python
- Experience with oil and gas infrastructure software
- Experience in agile scrum methodology
- Hard-working and authorized to work for any employer in the USA

## PROFESSIONAL EXPERIENCE

**NEW CENTURY SOFTWARE – Fort Collins, CO**

**October 2015 – present**

New Century Software delivers pipeline integrity management software and services to the oil and gas industry.

### Software engineer II

- Currently coding a new application that is an ArcGIS Pro add-in from scratch. It will have similar functionality as [Express Loader](#). New experience with ArcGIS Pro/ ArcGIS Pro SDK, WPF, MVVM
- Implemented a bulk database operation algorithm in [Facility Manager](#), a tabular data maintenance application that loads into ArcMap as a toolbar. It updates database values through an interface that supports SQL server and Oracle databases.
- Took the lead in a development cycle of [Express Loader](#) (ExL), a tabular application that loads data from Excel, Access, Oracle, Ms SQL, ArcMap Shapefiles or geodatabases into an SQL server/Oracle database that implements a [Pipeline Open Data Standard](#) (PODS) data model. The main new feature in ExL 8.0 enables users to load ‘offline’ ESRI features, i.e. features that do not intersect with the pipeline but are associated with a particular location on one or several pipelines (i.e. think of compressor stations). My algorithm reads the ESRI features and associates those features with data that is either in the input or in the targeted database to build and run the queries needed to import the data into the target database.
- Took sole responsible for a development cycle of [Centerline Design toolkit](#) (CDT), an ArcMap toolbar that enables users to define scattered data points, locate a pipeline through interpolation and calculate linear measures along that pipeline. It further enables users to select point, linear or polygon features along the pipeline and import these into an Oracle/Ms Sql database that supports PODS through a feature called ‘Event Generator’. The Event Generator computes intersects between the selected data and the pipeline, defines linear references for these intersects, and imports those linear references into the database along with their measures along the pipeline. Previous use of CDT learnt that there were considerable performance and data management with the Event Generator. I restructured the code to reduce the features that it kept in memory while improving the performance by combining database queries that ran against the target database to define the linear referencing of the source features.
- Took sole responsible for a development cycle of PODS staging admin, a website portal to Oracle or MS SQL databases that enables versioning of the data by assigning different levels of privileges (i.e. users and gate keepers) to

its users. Users can submit data to a parallel database schema and gatekeepers move that data to the production schema upon quality checks.

**HARVARD FOREST & USDA FOREST SERVICE – Fort Collins, CO**

**September 2015- March 2016**

**Contractor**

- Added additional features to the model “PnET-Succession” (see next entry).

**PURDUE UNIVERSITY - West Lafayette, IN**

**2011-2015**

**Post-doctoral Fellow**

- Developed a new spatially explicit simulation model, “PnET-Succession”, to simulate growth and spread of tree species and associated forest carbon sequestration.

**AGROSCOPE RECKENHOLZ TAENIKON – Zürich, Switzerland**

**2010-2011**

**Post-doctoral Fellow**

- Simulated biomass and carbon dynamics in lowland grasslands in Switzerland.

**ALTERRA B.V. – Wageningen, Netherlands**

**2009-2010**

**Software developer**

- Developed GIS applications for spatial ecological models on dispersal patterns of plants and animal species in fragmented habitat.
- Expanded functionality of the metapopulation simulation model (METAPHOR) interface which operates as a standalone Windows program that uses GIS freeware to embed GIS capabilities into the program interface.

**IMK-IFU - Garmisch-Partenkirchen, Germany**

**2006-2009**

**Research Assistant**

- As part of EU’s NitroEurope research project on nitrogen cycling, developed a model subroutine *DECONIT* that was published as an isolated program and later embedded in a larger modeling platform MoBiLE.

## **EDUCATION**

**ALBERT LUDWIGS UNIVERSITY OF FREIBURG– Freiburg im Breisgau, Germany**

**2006-2009**

**PhD in Forest and Environmental Sciences**, with computer simulations emphasis, *magna cum laude*.

**WAGENINGEN UNIVERSITY – Wageningen, Netherlands**

**1998-2005**

**M.S. in Forestry and Environmental Sciences.**

**AMSTERDAM UNIVERSITY– Amsterdam, Netherlands**

**2001-2005**

**M.A. in Philosophy of Environmental Science.**