

# MALACHY TOBIN

CHICAGO, IL

## PROFESSIONAL SUMMARY

Over ten years experience in the design and development of web and desktop applications that automate workflows, simplify business processes and provide analysis that result in better service and cost and time savings.

## SKILL SET

- Design and development of Java EE web applications and services using Groovy, Grails, JSP, JSF, HTML, CSS, XML, JSON, JavaScript, Hibernate, Spring, MVC, Dojo, jQuery, and AJAX
- Developed Ruby scripts for automated testing using Cucumber
- Design and review of network architecture with respect to reliability, scalability and security of web applications and services
- Administer, manage and monitor web applications and services running in clustered, multitiered environments on WebLogic, Tomcat, Jboss, GeoServer and GeoWebCache
- Administer, manage, monitor Apache web servers running on Linux, manage SSL certificates and configuration
- Experience designing database models and writing to, querying and managing the intricacies of a variety of different databases including Oracle, Postgres, MongoDB, MySQL, SQLite, and MSAccess
- Implement and administer Jenkins, gradle, maven, JFrog for automated build and deployment
- Utilize Python, PLSQL, SQL, Oracle stored procedures for custom scripts, spatial data conversions, reporting, analysis, updates, inserts, validations and extracts
- Implement web mapping specific solutions that utilize GIS (Geographic Information Systems) API's such as ESRI Flex, ESRI Javascript, Google Maps, JTS and OpenLayers
- Excellent teammate who enjoys learning new technologies and values communication and iterative design

## EXPERIENCE

2013-Apr 2014 **Shoppertrak**

Chicago, IL

*Senior Software Developer*

- Added an analytics dashboard to customer facing reporting web application. Dashboard Integrated three data sources via web service and database query and displayed in a SpringMVC application using Highcharts and jQuery
- Member of pilot team tasked with changing project methodology from waterfall to agile. This included a focus on switching to test driven development and the change in workflow to support that. Research and pilot test libraries and frameworks. Go through the growing pains necessary to learn how best these practices can work with the processes and culture.
- Enhanced the internal operations web application by adding ability to view remote device snapshot and video images without plugins. The image and video files use a custom format that required interfacing with C libraries by using Java Native Access (JNA) to convert to jpg and png.
- Created a REST web service in Grails to allow client to create/read/update remote device network hierarchy information. MongoDB was chosen as the database because it could store hierarchy relationship structures in the simplest manner.
- Implemented Automated build and deploy processes on all major projects (using Gradle, Jenkins, Jfrog, Groovy scripts, pulling from Subversion and Git repositories). Trained other developers and QA on how to use these systems and the setup required for new projects.
- Formalized, standardized and communicated new branching strategy among technology and QA groups
- Upgraded internal operations web application to Spring 3.2 and move environments from Solaris/Sun Web Server to Linux/Jboss 7.1

- Augmented the Internal java data acquisition application to allow it to send commands and receive data from remote devices that use VPN and FTP protocols for connection and communication. This application is a custom pure java application that is threaded and uses Remote Method Invocation (JMI) for clustering to enable it to extract data from more than 50k devices around the world.

2012-May 2013 **CITY OF CHICAGO- DEPARTMENT OF INNOVATION AND TECHNOLOGY** Chicago, IL  
*Web Developer*

- Managing the GIS development portion of a project to integrate the 4 main City of Chicago permitting systems into an enterprise solution.
  - Requirements gathering, business analysis with the four main permitting departments to understand and document the data structure and workflows of existing systems, write the Request for Proposal
  - Design and technical requirements for the migration of over 12 data sets (PLSQL, Python scripts, Java processes)
  - Design and technical specification for a permit web map viewer (Javascript, DOJO)
  - Design and architecture of two separate web service API's (using Apache CXF, Spring security, Hibernate, LDAP authentication, fine-grained authorization)
  - Developed significant enhancements to existing custom geocoding services
  - Manage 6 contract developers using Agile methodology
- Upgrade a Java web dashboard that uses the MongoDB backend to provide city managers a view of breaking news feeds, current weather, real time city data and analytic metrics. Uses AJAX, JQuery, JSP, CSS
- Coordinate among the core group of developers for code reviews, software architecture reviews, to establish and communicate software design principles and guidelines
- Implemented an intranet Wiki for web application and service api documentation. Includes sample code, FAQ's, in depth parameter descriptions, instructional guides for using a simple web browser REST client to test services.

2005-2012 **CITY OF CHICAGO- DEPARTMENT OF INNOVATION AND TECHNOLOGY** Chicago, IL  
*Java Programmer*

- Integral part of a team that implemented a 9 node MongoDB cluster to store real time city of Chicago data for inter-departmental analytics and reporting
  - Architected cluster and document design
  - Designed and built the rest service interface and security model used to provide read access to the Mongo cluster
  - Developed a custom ESRI Adobe flash mapping application to spatially query and display real time city data. Includes tools to create heat maps and choropleths to identify hot spots and underserved areas
  - Developed five of the 14 ETL (extract, transform, load) data feeds from internal Oracle databases and public api's
- Designed and built enterprise address geocoding services that routinely handle more than 1 million request/day. These services provide address geocoding, reverse geocoding, linear geocoding (address range/on-from-to), routing, spatial data editing and static map image creation.
- Analyzed City of Chicago vehicle GPS data to summarize work crew performance, track progress, establish baseline metrics and identify outliers. Built a multi-threaded java process to automate the analysis for reporting systems.
- Managed a project for the Transportation department to coordinate Underground construction projects in Chicago. Project was credited with saving the city \$40 million by increasing efficiencies and dramatically reducing the amount of unnecessary street repaving done by the department.
  - Developed an apex front end for entering project information and viewing reports
  - Developed a spatial conflict detection procedure that flags projects that overlap in spatially
  - Developed a mapping application for displaying projects and conflicts.

- Designed and built a rapid web map development framework that allows us to take a map from conception to production in 2-4 hours.
  - Designed and developed a database model and rest service api for map configuration parameters
  - Can reuse existing map services
  - Designed a javascript map template for use with the map configuration service API

2004– 2005      **GIS SOLUTIONS**      Chicago, IL  
*Programmer*

- Developed custom desktop tools in vb6 that integrate with ArcMap desktop and MSAccess, design GIS database models and editing of street centerline layer, geographic overlay polygons, building footprints.

2003– 2004      **K C PRECISION MACHINING**      Woodale, IL  
*Freelance contractor*

- Worked to integrate 3-D design and manufacturing software into their manufacturing processes using Pro-E software to draft 3-D models and G-code for CNC machines to produce machined parts

2002– 2003      **KDI ENGINEERING**      Streamwood, IL  
*Freelance contractor*

- Created 3-D models of consumer products and packaging using Pro-e software

2001      **NORMEDAS SIAULIA**      Lithuania  
*Process Engineer*

- Process Engineering at a wood working plant in central Lithuania. Documented the company's processes and manufacturing work flow and developed a change in procedures to increase efficiencies and quality control by implementing a paper work system to track orders from inception to delivery

## EDUCATION

1996-2000      **UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN**      Urbana-Champaign, IL  
 Bachelor of Science, Mechanical Engineering