

**FORM TECH 6  
(CONTINUED)  
CURRICULUM VITAE**

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| <b>Position Title and No</b>            | IT Security Expert (REF # ET-FTA-354384-CS-INDV) |
| <b>Name of Expert</b>                   | Zelalem Teferi Abate                             |
| <b>Date of Birth</b>                    | 28 March 1987                                    |
| <b>Country of Citizenship/Residence</b> | Ethiopia   |

**Education:**

- **Master of Science in Cyber security (Network & Systems Security Stream)**, Addis Ababa Institute of Technology (AAiT), Addis Ababa University, Ethiopia [2023],
  - **Note: Initial Thesis work is delivered.**
- **Bachelor of Science in Computer Science**, Addis Ababa University, Ethiopia [2009]

**Certification:**

- **Programming in HTML5 with JavaScript and CSS3 (480)**, Microsoft Certified Professional (MCP) [2016]

**Relevant Trainings:**

- **Supervised Machine Learning: Regression and Classification**, Coursera (Verify online: <https://coursera.org/verify/L8KTNLFXZFKY>)
- **Advanced Learning Algorithms**, Coursera (Verify online: <https://coursera.org/verify/VW9X7JJSRQ2X>)
- **Unsupervised Learning, Recommenders, Reinforcement Learning**, Coursera, (Verify online: <https://www.coursera.org/account/accomplishments/certificate/5ZSD755KLRGG>)
- **System Architecture Design Strategies** June 2013, GISTEC, Addis Ababa
- **Visual Studio 2008 Windows Communication Foundation** July 2011, Neuronet PLC, Addis Ababa
- **Programming in C# with Microsoft Visual Studio 2010** April 2013, Neuronet PLC, Addis Ababa
- **Developing Web Applications with Microsoft Visual Studio 2010** April 2013, Neuronet PLC, Addis Ababa
- **Developing Microsoft ASP.NET Applications using Visual Studio .NET SP1** June 2011, Neuronet PLC, Addis Ababa
- **Developing Rich Internet Applications Using Microsoft Silverlight 4** May 2013, Neuronet PLC, Addis Ababa
- **Designing Microsoft SQL Server 2005 Database** July 2011, Neuronet PLC, Addis Ababa
- **Writing queries a Microsoft SQL Server 2008 Transact SQL** September 2011, Neuronet PLC, Addis Ababa
- **Maintaining a Microsoft SQL Server 2008 Database** September 2011, Neuronet PLC, Addis Ababa
- **Implementing a Microsoft SQL Server 2008 Database** August 2011, Neuronet PLC, Addis Ababa
- **Introduction to ArcGIS Server v10** June 2013, GISTEC, Addis Ababa
- **Visual Studio 2008 ADO.Net 3.5** June 2011, Neuronet PLC, Addis Ababa
- **Visual Studio 2008 Windows Work Flow Foundation** October 2011, Neuronet PLC, Addis Ababa
- **Visual Studio 2008 ASP.NET 3.5** October 2011, Neuronet PLC, Addis Ababa
- **Visual Studio 2008 Windows Presentation Foundation** November 2011, Neuronet PLC, Addis Ababa

## Employment record relevant to the assignment:

| Period                     | Employing Organization and your Title/Position. Contact Information for Reference  | Country  | Summary of activities performed relevant to the Assignment  |
|----------------------------|--|----------|---|
| February, 2016 to Present  | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> <b>Engineering Team Lead</b>   | Ethiopia | <ul style="list-style-type: none"> <li>National Cadastre law and technology readiness assessments, preparing workshop, report finding and recommendations, etc.</li> <li>Key stakeholder identification, client functional &amp; non-functional requirements gathered, analyzed then high and low level system designed that addresses security and performance constraints.</li> </ul>   |
| December, 2019 to Present  | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> <b>Web &amp; Application Engineer</b><br><br><i>Note: Security related project details are confidential.</i> | Ethiopia | <ul style="list-style-type: none"> <li>Analyzed more than five enterprises' requirements and designed using OOAD Methodologies for several internal and customer projects.</li> <li>Worked in multiple business domain, such as Cadastre, Land Management, Transportation, Finance (Accounting ERP)</li> <li>Analyzed, designed, led, coached, and oversee a development team for Addis Ababa Land Information System project,</li> <li>Web GIS application researched, prototype implemented, team established, coached, led, and upgraded three project legacy applications from desktop implementation.</li> <li>Led Cadastre System Engineering Team with more than five senior experts members</li> <li>For project and team experience, see below.</li> </ul> |
| January, 2023              | <b>Employer:</b> Addis Ababa Institute of Technology (AAiT)<br><b>Position:</b> <b>Penetration Testing (E-Birr User Android App)</b><br><br><i>Note: Project details are confidential.</i>   |          | <ul style="list-style-type: none"> <li>Vulnerability assessments and penetration testing done using the following tools: <ul style="list-style-type: none"> <li>Static analysis using tools; MobSF, JADX, Bytecode Viewer, etc.</li> <li>Dynamic analysis using tools; Nox Emulator, Burp Suite, Wireshark, Genymotion, etc.</li> </ul> </li> <li>Attack vector testing areas of the pontes: <ul style="list-style-type: none"> <li>Configuration Management Testing</li> <li>Authentication Testing</li> <li>Authorization Testing</li> <li>Session Management Testing</li> <li>Data Storage Analysis</li> </ul> </li> </ul>   |
| January, 2022 to May, 2022 | <b>Employer:</b> EXPERIAN INFORMATION SOLUTIONS, Inc.<br><b>Position:</b> <b>Secure Backend Developer (Remote Consultant)</b>  |          | <ul style="list-style-type: none"> <li>Secure Cloud based, state-of-the-art, system development and implementation (AWS Secrete Manager),</li> <li>Security bugs fixed which are found and reported by independent penetration testing firm,</li> <li>Implementing new features following Secure Software Development Practices, etc.</li> </ul>  |

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| December, 2019 to June, 2021      | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> Web GIS Virtual Team Lead  | Ethiopia | <ul style="list-style-type: none"> <li>• Took the appointment to research Web GIS technologies and established the team,</li> <li>• Research and studied the Web-GIS domain knowledge, skill, standards, technologies, tools, &amp; expertise needs &amp; presented the founding,</li> <li>• Prepared the “Initial Operating Capability” as roadmap,</li> <li>• Led the team and developed the prototype.</li> </ul>   |
| November, 2017 to December, 2019  | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> Development Team Lead      | Ethiopia | <ul style="list-style-type: none"> <li>• Developed, coach, and led the Land Information (Sub)System Team (One of the subsystem among three subsystems in the project),</li> <li>• Integrated the developed application with the subsystems, tested, and deployed,</li> <li>• Trained the customer’s experts.</li> </ul>  |
| July 2015 to February, 2016       | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> Project Technical Manager  | Ethiopia | <ul style="list-style-type: none"> <li>• Led, coached, and managed fleet management system development team with more seven members,</li> <li>• Additionally served as Product Owner,</li> <li>• Led and monitor all the System(SW) Development Lifecycle (SDLC) Process,</li> <li>• Requirements analyzed and designed using Object Oriented Analysis &amp; Design (OOAD)</li> </ul>  |
| September, 2014 to July 2015      | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> Project Manager            | Ethiopia | <ul style="list-style-type: none"> <li>• Used “MS Agile SW Solution 5.0”, Scrum Software Management Methodology,</li> <li>• Used “MS Team Foundation Server (TFS 2010)” and “SharePoint 2010” as Version Control, Issue Tracking, and Documentation Tools,</li> <li>• Mapped Requirement with GPS Configuration and documented,</li> <li>• Prepared frequent and periodical reports and letters for internal and customer</li> </ul>   |
| November, 2012 to September, 2014 | <b>Employer:</b> Information Network Security Agency (INSA)<br><b>Position:</b> Geospatial System Engineer | Ethiopia | <ul style="list-style-type: none"> <li>• Engineered &amp; developed web applications, based on GPS and Web Mapping technology, which used to track Vehicles and manages transportation company resources (Driver, Dispatcher, etc.).</li> <li>• Participated &amp; serviced in National Technical Steering Committee (member) to implement NFMS nationwide in the governmental organizations, such as for Custom Authority.</li> <li>• Automated the house demolition cost compensation calculator of Addis Ababa-City Administration (Urban Planning and Development),</li> </ul> |

### Languages Skills:

| Language | Reading   | Speaking  | Writing   |
|----------|-----------|-----------|-----------|
| English  | Excellent | Excellent | Excellent |
| Amharic  | Excellent | Excellent | Excellent |

**Adequacy for the Assignment:**

| Detailed Tasks Assigned  | Work undertaken that best illustrates capability to handle the tasks assigned: |   |
|--|--|---|
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>  | <ul style="list-style-type: none"> <li>National Cadastre Real Property Registration System Project</li> <li>Integrated Land Use Planning System</li> </ul>  |
| <ul style="list-style-type: none"> <li>Team Lead,</li> <li>Security &amp; Infrastructure Architect,</li> <li>System Engineering (Requirement Analysis, Non-functional, Security Design, etc.)</li> <li>Project Management</li> <li>Product Owner</li> <li>DevOps (Local Build, Product Release, Patch Management)</li> </ul> | <b>Year:</b>   | Feb, 2016 to Present  |
|  | <b>Location:</b>   | Nationwide, Ethiopia  |
|  | <b>Employer:</b>   | Information Network Security Administration (INSA)  |
|  | <b>Client:</b>   | <ul style="list-style-type: none"> <li>Ethiopian Federal Government (6 major cities)</li> <li>Adama City Administration</li> <li>Sheger City Administration</li> <li>Oromia Regional Government</li> </ul>  |
|  | <b>Main project features:</b>  | Enterprise Application, Geo-information System (GIS), Cadastre, Land Information System, Secure Software Development & Deployment, etc.   |
|  | <b>Position held:</b>  | <b>Engineering Team Lead</b>  |
|  | <b>Activities performed:</b>   | <ul style="list-style-type: none"> <li>Engineered, tested, deployed, trained, customer supported, and maintained the Cadastre Real Property Registration System which has been implemented nationwide in Ethiopia and for Addis Ababa Cadastre System,</li> <li>Prepared and has been maintained the software engineering artifacts, such as RAD, SAD, Technical Manual (System and software installation, configuration, deployment and setup on server and workstation environments), User Manual,</li> <li>Change request engineering and management, patching and maintaining the system, enhancing the system by R&amp;D in-house and realizing new versions,</li> <li>National Cadastre Real Property Registration System is implemented in six pilot cities and the project is finalized and closed out, currently its warranty period,</li> </ul> |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>  | <ul style="list-style-type: none"> <li>Addis Ababa Land Information System project</li> <li>National Cadastre Real Property Registration System Project</li> </ul>  |
| <ul style="list-style-type: none"> <li>System Engineering (Requirement Analysis, Non-functional, Security Design, etc.),</li> <li>Security &amp; Infrastructure Architect,</li> <li>Low level designing,</li> <li>System Integration Test,</li> <li>Authentication &amp;</li> </ul>  | <b>Year:</b>   | December, 2019 to Present   |
|  | <b>Location:</b>   | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>   | Information Network Security Administration (INSA)  |
|  | <b>Client:</b>   | <ul style="list-style-type: none"> <li>Ethiopian Federal Government</li> <li>Addis Ababa City Administration</li> </ul>   |
|  | <b>Main project features:</b>  | Software Engineering, Software Development Lifecycle (SDLC), GIS Analysis & Development, Object Oriented Analysis Development, System Testing & Integration, etc.   |
|  | <b>Position held:</b>  | <b>Web &amp; Application Engineer</b>   |

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| Authorization Design & Implementation, etc.  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Analyzed more than five enterprises' requirements and designed using OOAD Methodologies for several internal and customer projects.</li> <li>Worked in multiple business domain, such as Cadastre, Land Management, Transportation, Finance (Accounting ERP)</li> <li>Analyzed, designed, led, coached, and oversee a development team for Addis Ababa Land Information System project,</li> <li>Web GIS application researched, prototype implemented, team established, coached, led, and upgraded three project legacy applications from desktop implementation.</li> <li>Led Cadastre System Engineering Team with more than five senior experts members</li> <li>For project and team experience, see below.</li> </ul> |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | <ul style="list-style-type: none"> <li>Business Intelligence &amp; Consulting Services</li> <li>Contract Management Software,</li> <li>Procurement and Acquisition Management</li> </ul>  |
| <ul style="list-style-type: none"> <li>Azure DevOps Development,</li> <li>Software as a Service (SaaS),</li> <li>Frontend Development &amp; enhancements,</li> <li>Backend development &amp; maintenance, etc.</li> </ul>  | <b>Year:</b>                  | May, 2022 – Oct, 2022   |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Remote Consultant   |
|  | <b>Client:</b>                | DISTRIBUTED SOLUTIONS, Inc. (Reston, Virginia USA)  |
|  | <b>Main project features:</b> | Full Stack Web Development (Dot.NET Framework (Web Forms, MVC, WebAPI)), Federal Acquisition, Contract Management Software, Procurement, Acquisition Management, Vendor Portal & Engagement, Business Intelligence, Consulting Services, Business Process Automation, Reporting and Analytics, etc.   |
|  | <b>Position held:</b>         | <b>Full-Stack Developer (Remote Developer)</b>  |
|  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Maintained, enhanced, and bug-ticket handled in legacy ASP.Net Web Forms and .NET Core projects.</li> <li>Developed complex reusable Web Components in TypeScript and HTML Web Component and integrated (Frontend),</li> <li>Developed TagHelper, complex reusable web components and integrated in .NET Core projects (Backend).</li> </ul>   |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | Remote Consultant   |
| <ul style="list-style-type: none"> <li>Amazon Web Service (AWS) Development,</li> <li>Software as a Service (SaaS),</li> <li>Cloud AWS Secret Manager &amp; Microservice,</li> <li>Secure Development,</li> <li>Backend development &amp; maintenance, etc.</li> </ul> | <b>Year:</b>                  | Jan, 2022 to May, 2022  |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Remote Consultant   |
|  | <b>Client:</b>                | EXPERIAN INFORMATION SOLUTIONS, Inc. (USA)  |
|  | <b>Main project features:</b> | Secure Software Development, Amazon Web Service (AWS) Cloud, Server-less API Development & Deployment, Secure AWS Secret Manager, Microservice, etc.  |
|  | <b>Position held:</b>         | <b>Secure Backend Developer</b>   |

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|  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Developed and replaced existed Dot.NET Core based AWS Secrets Manager with WS.SDK.Secrets.Manager.Caching, .NET caching client (AWS Lambda - Serverless), and integrated in more than five project repositories (Secure Development).</li> <li>Debugged, fixed, developed, integrated and documented in a number of ASP.NET Core, WebAPI, and AWS Lambda Microservice based large projects.</li> </ul>   |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | Web-GIS (Web-Mapping) R&D Project   |
| <ul style="list-style-type: none"> <li>Scalable &amp; Efficient Web Map Development, Configuration, &amp; Deployment,</li> <li>Research &amp; Development,</li> <li>Secure Development,</li> <li>Train &amp; Coach Teams</li> </ul>    | <b>Year:</b>                  | Dec, 2019 to June, 2021   |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|  | <b>Main project features:</b> | Web Mapping, Interoperable GIS Web-Services (OGC) Standards, Digital Map Publishing, Performance Tuning (GeoJSON), Secure Development, Spatial Database, GIS Web Client API (LeafletJS, OpenLayer, etc.) with backend Dot.Net Core, Linux Headless Server Deployment, Dockerization, etc.   |
|  | <b>Position held:</b>         | <b>Web GIS Virtual (Additional) Team Lead</b>   |
|  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Took the appointment to research Web GIS technologies and established the team,</li> <li>Research and studied the Web-GIS domain knowledge, skill, standards, technologies, tools, &amp; expertise needs &amp; presented the founding,</li> <li>Prepared the "Initial Operating Capability" as roadmap,</li> <li>Led the team and developed the prototype.</li> <li>Took the responsibilities to enhance Web GIS prototype, include advanced features, build more team capabilities by R&amp;D,</li> <li>Led the team in parallel with Cadastre System Engineering Team,</li> <li>Adopted industry standards, such as OGC,</li> <li>Trained, coached and support the team members,</li> <li>Developed GIS standard and web based mapping application which is capable of viewing and editing digital map (Image) with raw spatial data,</li> </ul> |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | Addis Ababa Land Information System   |
| <ul style="list-style-type: none"> <li>Appointed as Development Lead to apply and implement the Web GIS prototype ( Experience gained in the previous assignment),</li> <li>Requirement Analysis &amp; Web Map Development,</li> </ul> | <b>Year:</b>                  | Nov, 2017 to Dec, 2019  |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|  | <b>Client:</b>                | Addis Ababa City Administration   |
|  | <b>Main project features:</b> | Secure Development, Spatial Database, GIS Web Client API (LeafletJS, OpenLayer, etc.) with backend Dot.Net Core, Linux Headless Server Deployment, Dockerization, etc.  |
|  | <b>Position held:</b>         | <b>Development Team Lead</b>  |

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| <ul style="list-style-type: none"> <li>• Deployment Design, Configuration,</li> <li>• End-user Training,</li> <li>• Integration &amp; deployment, etc.</li> </ul>  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>• Requirement developed, analyzed, and designed,</li> <li>• Developed, coach, and led the Land Information (Sub)System Team (One of the subsystem among three subsystems in the project),</li> <li>• Integrated the developed application with the subsystems, tested, and deployed,</li> <li>• Trained the customer's experts.</li> </ul>   |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | INSA Fleet Management System (Project)  |
| <ul style="list-style-type: none"> <li>• Team Management,</li> <li>• Technology Assessment,</li> <li>• SDLC &amp; Agile,</li> <li>• Reporting,</li> <li>• Requirement Analysis &amp; Web Map Development, Deployment Design, etc.</li> </ul>             | <b>Year:</b>                  | July 2015 to Feb, 2016  |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|  | <b>Client:</b>                | Addis Ababa Water and Sewerage Authority  |
|  | <b>Main project features:</b> | GPS, Location Based System, Google Map, Vehicle & Driver Management, etc.   |
|  | <b>Position held:</b>         | <b>Project Technical Manager</b>  |
|  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>• Led, coached, and managed fleet management system development team with more seven members,</li> <li>• Additionally served as Product Owner,</li> <li>• Led and monitor all the System(SW) Development Lifecycle (SDLC) Process,</li> <li>• Requirements analyzed and designed using Object Oriented Analysis &amp; Design (OOAD)</li> <li>• Prepared RAD and SAD documents.</li> <li>• Used "MS Agile SW Solution 5.0", Scrum Software Management Methodology,</li> <li>• Used "MS Team Foundation Server (TFS 2010)" and "SharePoint 2010" as Version Control, Issue Tracking, and Documentation Tools,</li> <li>• Mapped Requirement with GPS Configuration and documented,</li> <li>• Supervised GPS hardware configuration, installation, and Hardware - System integration.</li> </ul> |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | INSA Fleet Management System (Project)  |
| <ul style="list-style-type: none"> <li>• Customer Management,</li> <li>• DevOps, SDLC &amp; Agile,</li> <li>• Requirement mapping with GPS Configuration,</li> <li>• GPS Configuration Supervising,</li> <li>• PRINCE II, Project Management,</li> </ul> | <b>Year:</b>                  | Sept, 2014 to July 2015   |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|  | <b>Client:</b>                | Development Bank of Ethiopia  |
|  | <b>Main project features:</b> | MS Agile SW Solution 5.0", Scrum Project Management, MS Team Foundation Server, Location Based (GPS based) System, etc.   |
|  | <b>Position held:</b>         | <b>Project Manager</b>  |



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| <ul style="list-style-type: none"> <li>Reporting,</li> <li>Project Deliverables, etc.</li> </ul>  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Managed fleet management system development with 7 - 9 team member size for customer project,</li> <li>Also Served as Product Owner,</li> <li>Used "MS Agile SW Solution 5.0", Scrum Software Management Methodology,</li> <li>Used "MS Team Foundation Server (TFS 2010)" and "SharePoint 2010" as Version Control, Issue Tracking, and Documentation Tools,</li> <li>Mapped Requirement with GPS Configuration and documented,</li> <li>Supervised GPS hardware configuration, installation, and Hardware - System integration.</li> <li>Prepared frequent and periodical reports and letters for internal and customer</li> </ul>   |
| <b>Detailed Tasks Assigned:</b>   | <b>Name of project:</b>       | <ul style="list-style-type: none"> <li>National Fleet Management System (NFMS Projects),</li> <li>(House Building) Cost Compensation Calculator (IC3)</li> </ul>  |
| <ul style="list-style-type: none"> <li>Designed &amp; Implemented INSA's FMS for more than five transport companies, two service providers, and for Ministry of Transport,</li> <li>GIS navigation system module integration,</li> <li>Distributed Desktop &amp; Service oriented Application developments, etc.</li> </ul> | <b>Year:</b>                  | Nov, 2012 to Sept, 2014   |
|   | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|   | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|   | <b>Client:</b>                | <ul style="list-style-type: none"> <li>Ministry of Transport (NFMS Projects),</li> <li>Addis Ababa City Administration (IC3 Project)</li> </ul>   |
|   | <b>Main project features:</b> | <p>Web applications based on GPS and Web Mapping technology, which used to track Vehicles and manage transportation company resources (Driver, Dispatcher, etc.). Manage national import &amp; export cargo transportation, mainly on Ethio-Djebuti road route, etc.</p> <p>Calculate compensation cost of house building raw materials, Service Oriented Architecture (SOA), Microsoft Messaging Queuing (MSMQ), etc.</p>  |
|   | <b>Position held:</b>         | <b>Geospatial System Engineer</b>   |
|   | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Engineered &amp; developed web applications, based on GPS and Web Mapping technology,</li> <li>Participated &amp; served in National Technical Steering Committee (member) to implement NFMS nationwide in the governmental organizations, such as for Custom Authority.</li> <li>INSA Cost Compensation Calculator (IC3).</li> <li>Automated the house demolition cost compensation calculator of Addis Ababa-City Administration (Urban Planning and Development),</li> <li>Appointed to integrate I-GIS mapping sub-module for parcel data visualization and navigation of Addis Ababa city,</li> <li>Developed Distributed Desktop Application in which SOA and Messaging Queuing (MSMQ) is used,</li> </ul> |
| <b>Detailed Tasks Assigned:</b>   | <b>Name of project:</b>       | INSA Desktop GIS Software (I-GIS Project)   |
| <ul style="list-style-type: none"> <li>Research &amp; Development,</li> </ul>   | <b>Year:</b>                  | Sept, 2011 to Nov, 2012   |
|   | <b>Location:</b>              | Addis Ababa, Ethiopia   |



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| <ul style="list-style-type: none"> <li>Commercial vs. Open Source GIS Software Application Assessment, etc.</li> </ul> | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|  | <b>Main project features:</b> | Research and Development of INSA's Desktop GIS Software, GIS Data & Map View and or Editing, etc.   |
|  | <b>Position held:</b>         | <b>Researcher (R&amp;D Developer)</b>   |
|  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Researched &amp; developed I-GIS, windows desktop application, that aimed to replace the expensive Arc-View desktop application which used for creating, editing, &amp; viewing digital map.</li> <li>I-GIS developed based on 'mapwingis' ActiveX Control that comes from GIS free &amp; open source (OSS) Mapwindow project,</li> <li>I-GIS supports ESRI Shape file specification (Spatial data type).</li> </ul> |
| <b>Detailed Tasks Assigned:</b>  | <b>Name of project:</b>       | General & GIS Application Developer Trainee.  |
| <ul style="list-style-type: none"> <li>Trainee</li> </ul>  | <b>Year:</b>                  | Oct, 2009 to Sept, 2011   |
|  | <b>Location:</b>              | Addis Ababa, Ethiopia   |
|  | <b>Employer:</b>              | Information Network Security Administration (INSA)  |
|  | <b>Main project features:</b> | R&D and basic customer support.   |
|  | <b>Position held:</b>         | <b>IT Professional (Programmer)</b>   |
|  | <b>Activities performed:</b>  | <ul style="list-style-type: none"> <li>Trained and developed Windows Form based sample application using C#,</li> <li>Application source code coding-standard and documentation,</li> <li>Basic GIS knowledge, applications, and products,</li> <li>Supported and maintained different customers and clients' vehicle management system applications (GPS based).</li> </ul>  |

Expert contact information: E-mail: [phatzolo@gmail.com](mailto:phatzolo@gmail.com); Phone: +251 913630260

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client.

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| <b>Zelalem Teferi Abate</b> |           | November, 2023 |
| Name of Expert              | Signature | Date           |