Yoseph Berhanu Alebachew

(June 2022)

INTRO

A curious professional with over 10 years of professional software development, consultancy, teaching, and research experience.

ADDRESS

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PROFESSIONAL SKILLS

Languages: Java, C#, C/C++, Python, JavaScript/Typescript, PHP, SQL

Databases: PostgreSQL/PostGIS, MySQL, Oracle 11g + Oracle Spatial Option

Tools: MATHLAB/Octave, MapBuilder 11, QGIS, UML, Weka, Google Refine/ OpenRefine, Glassfish 4.0

Frameworks & Libraries: Angular, Keras, MPI (OpenMPI) and OpenMP, Apertium , ROS

Others: Strong knowledge of Software life cycle, Web Services and Algorithm Development

EDUCATION

B.Sc. in Computer Science, Addis Ababa University, Addis Ababa, Ethiopia, 2007 /2008–2009/2010 **CGPA is 3.74, Major GPA 3.94**

M.Sc. in Computer Science, Addis Ababa University, Addis Ababa, Ethiopia, 2011/2012 – 2013/2014 **CGPA is 3.96** - Thesis title: - ***A Framework for Multi-Source Prefetching with Adaptive Weights****, Thesis* grade: - ***Excellent***

HONORS

- I graduated top of my class when I was attending both B.Sc. and M.Sc. in Computer Science from Addis Ababa University.
- I was recognized by my department for my contribution in advancing artificial intelligence at the department and in the country.

PROFESSIONAL TRAINING & CERTIFICATIONS

- CODATA RDA Research Data Science Summer School , June 3 - 14, 2019, Addis Ababa University, Addis Ababa, Ethiopia.
- IBM Big Data Developer, IBM MEA University Program / ETHERNET Program, Ministry of Education, October 10-14, 2016
- IBM Application Security Specialist, IBM MEA University Program / Center of Information Technology and Scientific Computing, Addis Ababa Institute of Technology, September 7 - 11, 2015
- IBM Work Light Mobile Application Developer, IBM MEA University Program / Center of Information Technology and Scientific Computing, Addis Ababa Institute of Technology, June 22 - 26, 2015
- Linux Professional Institute certification 1 (LPIC1) Training, AAIT LPI Academy, Addis Ababa February 2014
- PMI Project Management Training, CITRI, IT doctoral Program Addis Ababa University, Jan 09 - Jan 18, 2013
- Java SE 7 Programming, Oracle Academy, Africa operations, From Aug 20 - Aug 24, 2012

PROFESSIONAL EXPERIENCE

Software Developer (Partial List)

Organization: Digital Medarbeider AS,

Position: Tech Lead

Dates: December 2019 – August 2021

Address:

Website: www.digitalmedarbeider.no
Meltzers gate 4
N-0257 Oslo, Norway

General Responsibilities: I was responsible for software development tasks and team supervision of over 15 developers. I took part in various levels of the software development tasks from designing the software architecture to writing frontend and backend code. And setting up the DevOps standards and CI/CD environment on GitLab and Azure. I also built libraries used across projects within the organization including the authentication, authorization, and auditing service, common translation service (with semi-automatic translation capabilities using the apertium machine translation platform), and common proxy services for external API integration.

Project: **OMV**

Description: A digital Service to apply for permission to drive an outdoor motor vehicle. The overall project objective is to develop a service that enables inhabitants to apply for permission to drive outdoor motor vehicles. The service needs to be developed within the framework of the high-level architecture that is included as part of this document. Specifically, the project is aimed at developing a multi-tenant service that serves two user groups- inhabitants and administrators

Driving with motorized vehicles in the outfield is regulated by the Motor Traffic Act and associated regulations. The law is enforced by municipalities. In Norway, inhabitants can apply to drive motorized vehicles on land, water, and air. Most people will apply for driving on land (snow scooters). The reasons for applications will vary a lot. Some are cabin owners, some have disabilities and need to drive from A to B, and others need to transport items.

Responsibilities:

- Performed requirement analysis.
- System Design and Development.
- Team management

Technologies: Dot net Core, Angular, Cosmos DB, Azure (DevOps, KeyVault, Storage, App Services, Functions, AAD)

Project: smartbarnehageopptak.no

Description: A web-based service to automate the process of signing up for kindergarten. The application will contain one parent application and two administration modules.

Responsibilities

- Performed requirement analysis.
- System Design and Development.
- Team management

Technologies: Dot net Core, Angular, Cosmos DB, Azure (DevOps, Keyvault, Storage, App Services, Functions, AAD)

Project: SOL

Description: The main objective of this project is to make a service that allows the inhabitant to simple and efficient application to separate land by drawing directly in the application. The application should have a Norkart integration to provide all relevant information (cultural heritage, flood risk, houses on the property, etc..). This drawing will together with the rest of the information in the application be sent to the case worker in the municipality. Personalia is pre-filled with data from Folkeregisteret. Map from Norkart with map layers to give additional information

Responsibilities

- Performed requirement analysis.
- System Design and Development.
- Team management

Technologies: Dot net Core, Angular, Cosmos DB, Azure (DevOps, KeyVault, Storage, App Services, Functions, AAD)

Client: Land Investment for Transformation (LIFT) Programme, Federal Democratic Republic of Ethiopia Ministry of Agriculture – DAI/ DFID project

Position: Software Development Consultant

Dates: November 10, 2014 – To Date

Address:

Phone: +251 (0) 116676776
Website: www.dai.com

Project: MASSREG

Description: MASSREG – Is an acronym for MASS Registration of Land Parcels. Its software enables systematic registration of both the spatial details of the parcels and the personal details of the landholders. It is developed to enable the registration of land parcels in the nation.

Responsibilities

- Design and development of the system
- Overseeing deployment and user training process

- Documented each phase.

Technologies: JEE, GWT, PostgreSQL and PostGIS, Evolus, MathLab , Glassfish 4.0

Project Name: LIFT MIS

Description: The LIFT MIS is the central repository of both static and dynamic data to inform, or to be used by management in making strategic and operational decisions based on real data. It is a multi-layered web application and will continue to grow throughout the lifetime of the project. There are two major parts of the MIS: The static/pdf document repository and the dynamic spreadsheet processor and report generator – which is a custom-built application.

Responsibilities:

- Perform requirement gathering and analysis
- System design.
- Documented each phase.

Technologies: Laravel, MySQL

Project: iWORLAIS

iWORLAIS is a software built as an interim system to be used for handling of land transitions until the national system is ready to be rolled out to the woredas. It must support all transactions as prescribed in the Land Admin Manual to the same level as the national system would. Primary source of date of iWORLAIS is MASSREG.

Responsibilities

- Participated in requirement gathering and analysis
- Participated in System design.
- Programming

Technologies: JEE, PostgreSQL and PostGIS, Glassfish 4.0

Organization: Artisan Technologies PLC

Position: Tech Lead

Dates: July 2016 – December 31,2017

Address:

Website: www.artisan.et
Phone: +251-91-301-1296

Project: Commission Payment Management System

Description: Design and development of a Commission Payments Management System (CPS) for "*Commercial Nominees PLC*", as a subsidiary of Commercial Bank of Ethiopia. The system manages the outsourced payment service Commercial Nominees provides for its various clients such as the Ethiopian Roads Authority and Ethiopian Railway Corporation. The system handles

the entire process from contract signing with the client to payment requests registration to commission calculation and staling. It provided reporting and monitoring features for managerial and decision support.

Responsibilities:

- Performed requirement gathering and analysis.
- System Design and Development.

Technologies: JEE, PostgreSQL, Glassfish 4.0

Client: African Center for Disaster Risk Management

Project: Quiz Based Simple Desktop Game

Dates: April 1, 2015 – April 25 2015

Position: Software Development Consultant

Address:

Phone: +251 (0) 911645248
Website: www.aau.edu.et/acdrm

Responsibilities:

- Initiate and oversee the project to develop a simple quiz-based game for the African Center of Disaster Risk Management
- Analyze requirements and provide suggestions on approaches, tools, and techniques for the project
- System Design and Development
- Implementation and deployment of the software tool

Technologies: **C#,** WPF

Consultancy

Client: World Bank Group
Position: LIS consultant
Project: Land Management and Urban Upgrading Project (LMUP)
Date: March 2022 – To Date

Task: The Land Management and Urban Upgrading Project (LMUP) aims to strengthen institutional capacity for land management and improve the living conditions of selected neighborhoods. My responsibility in the project is to support project scoping, design, and preparation. I help the Bank team and GoE to prepare the land management investments of the Project with a particular focus on situation analysis, recommendations (recommend design, effective implementation arrangements for project activities), and estimate costs and benefits of the proposed project.

Client: NIRAS Finland OY REILA Project
Position: IT Expert
Project: Web portal standard and guideline development
Date: December 2020 – To September 2021
Address: Addis Ababa Ethiopia

Task: I worked on the National Rural Land Information System (NRLAIS) developed for the Ministry of Agriculture, Ethiopia. My responsibilities include developing components of the system and overseeing the overall direction of the system as it evolves over time.

Technology Used: Java, Python, QGIS

Client: World Resources Institute
Position: Technical Lead
Project: Addis Ababa City Public Transportation Route Digitalization
Date: July 2018 – September 2018

Task: Establishing digital public transportation route management for Addis Ababa City. This included developing a data collection platform, setting standards and methodology for data collection, managing a group of students who worked as data collectors, and developing the final digital map along with teammates.

Technology Used: Java, QGIS

Client: Addis Ababa City Government Communication Affairs Bureau
Position: Consultant
Project: Web portal standard and guideline development
Date: December 10, 2012 – To July 2016
Address: Addis Ababa Ethiopia

Task: Develop content and administration guidelines for websites of all bureaus, sub cities, agencies under Addis Ababa City.

Teaching/Research

Department of Computer Science, Addis Ababa University
September 30, 2010 – To Date
Graduate Assistant (till 29/09/2011) / Assistant Lecturer(till 29/07/2014) / Lecturer (current)
Address:
Phone: +251-11-122-2922
Fax: +251-11-123-9469
Website: www.aau.edu.et

Courses Thought

Introduction to Computer Science, Introduction to Programming, Advanced Programming in Unix Environment, Data Structures and Analysis of Algorithms, Theory of Algorithms, Object-Oriented Programming, Database Management Systems, High-Performance Computing.

Research Project

I established an undergraduate research & development lab at the Department of Computer science, 4K Labs, with brought students and faculty from multiple academic units together (i.e., Department of Computer Science, School of Electrical and Computer Engineering, and School of Mechanical Engineering) to work on cross-discipline research endeavors such as Robotics, Autonomies Vehicles and IoT. As one of the achievements of this Lab, we took part in the African RoboCup Soccer competition and won first prize. We have also won a small grant from the Internet Society to work on Smart Home Project.

Through this lab and other collaborations, I got the chance to work on projects with amazing students and colleagues. One such project is to build Amharic Morphological Generator as part of an effort to build a morphological analyzer for the Amharic language. The core idea behind the generator is to build a morphological tree from root words and prune the tree using a corpus of valid words with the aim of identifying valid inflectional rules in one of the most morphologically complex languages, Amharic. We managed to demonstrate proof of concept with a few sample roots and subsequent endeavors will focus on scaling the solution to all root words in the language.

Another project I've worked on with students is a decision support system for student advising using a rule-based declarative language. The primary goal of the project was to build a software architecture and a prototype that decoupled the business logic of the student information system at the university in order to make the rule editable without the need to rebuild the entire system again. Traditionally such a system is built using imperative programming languages such as Java, C#, or PHP where the rules of the system are hardcoded into a logical code block. This limited the flexibility of the system as business rules change. By decoupling this logic from the other components of the software it can be loaded from a logic engine built with technologies such as prolog at runtime. We developed a prototype e-advisor and demonstrated the feasibility of such architecture.

Other projects I've worked on include a computer vision-based campus car parking management system, an organizational document metadata store, and a tracking system.

Community Service

I severed on a number of committees including the departmental academic committee, an ad-hoc committee for departmental community service guideline preparation, and various project management committees.

Together with colleagues, I organized a community outreach program in which an introductory course was given to close to 500 high school students from multiple schools in the city. We recruited 15 volunteer undergraduate students to conduct the training.

REFERENCES

Muluget Libsie (Ph.D) – MSc. Thesis Advisor
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