

# Oscar Ucedo, Software/Data Architect

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## Oscar Ucedo

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### Primary Skills

I am a proactive, experienced Software Architect, Technical Leader, and Developer with a track record of delivering quality solutions rapidly in the IT- and information industries. Over twenty years of success in meeting critical software engineering challenges. I have worked in the capacities of architect, manager, data scientist, developer, systems analysis & designer, using technologies like C, C++, Java/J2EE and .NET-C# and interoperability tools like MQ Series/MSMQ and SOA tools on a number of large scale and complex projects. I have greatly enjoyed using SOA design patterns to integrate large-scale web-applications, cloud systems and legacy client enterprise applications. I also worked in the capacity of a WebSphere Administrator performing duties as planning and designing complex topologies for supporting clustering, load balancing and catching edge components using IBM technologies.

Architecting, developing and delivering systems is quite enjoyable to me, however I also relish the human side of the industry. I get the most out of work when interacting constantly with stakeholders to deliver systems that add value and offer a massive return on investments. I have the ability to coach and motivate and manage local (onshore) and remote (offshore) teams to ensure the best results.

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### Additional Skills

**Data Scientist Enthusiast:** I am a self taught data science enthusiast who capitalize my long experience with computing, strong “math” and “statistics” foundation and data analysis skills to be a well rounded data scientist to collect, analyze and interpret large data sets.

Experience in Python, Scala, Java, C, C++, C# or R. Currently using following software packages like numpy, pandas, jupyter, matplotlib, scipy, nltk, spacy, keras, and tensorflow.

Currently enrolled on a Certification 11-week program:

★ Machine Learning Algorithms: (11 weeks course).

Professor: Andrew Ng. Adjunct Professor, Stanford University.

**Business Intelligence Analyst:** Deliver many business analytics to TRTA VP level stakeholders using ETL, Integration, Analytics, Reporting and Visualization tools. Currently integration MS Power as a new Visualization tool. Hands-on

experience using SSIS, SSRS, and Power BI. Strong on data warehousing using SQL Server and Oracle platforms.

**Real-time web applications with NodeJs.** Developed a CPL Dashboard POC using Node.JS and Google API for charts and PostgreSQL DB. It was deployed in our AWS Elasticsearch account.

1. IDE: Visual Studio Code.
2. Deployment Server: Node.JS
3. Web Framework: Express for Node.JS (minimal and flexible that resembles MVC)
  - EJS package to generate HTML markup in addition to Jade templates.
  - Logger package : Winston
  - Template engine : JADE
4. Database: PostgreSQL with Oracle SQL Developer as GUI.
  - Database package for Postgres: PG package
  - Database package for SQL Server: TEDIIOUS package.

## Experience

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### Thomson Reuters - Checkpoint Learning/Learnlive

#### Operations Lead / Data Scientist

JULY 2015 - PRESENT, Carrollton TX

Lead quality engineering and operations support of customer-facing Checkpoint Learning (CPL)/Learnlive Learning systems.

Acted as liaison between stakeholders and technical team to discuss about requirements on new needs, process and tools or resolutions to existing problems. Or, simply telling them stories or ideas that resonate to them on behalf of our applications.

Excellent understanding of Learning products that allows me to troubleshoot problems and advice stakeholders and external customers on resolutions.

Built an AI course recommender system.

Leveraged content-based recommender algorithms (text similarity, TF-IDF) and collaborative filtering methods (co-occurrence matrix) to provide users with personalized recommended courses

### Thomson Reuters - Checkpoint Learning / Software Architect/Manager

JANUARY 2011 -MARCH 2015, Fort Worth TX

Worked as a Software Architect with responsibility to Analyze business needs/requirements and come up with technical solutions. Assisted project managers in project planning with thoughtful time and cost estimates and risk identification and analysis. Managed/coordinated technical projects to make sure they are completed on time and meet customer requirements. Interfaced with clients to determine their business needs and systems requirements. Provided technical guidance to developers n the team. Design and Development on various APIs and/or client web sites utilizing Microsoft Active Server Pages (ASP), Microsoft .NET, Microsoft SQL Server, DHTML, JavaScript, AJAX, XML, to meet business needs. Interfaced with users to troubleshoot user issues and resolve application issues. Document application specification, system design or process flow.

### Thomson Reuters - MIS Unison / Manager

MAY 2008 - DECEMBER 2010, Fort Worth TX

- Worked on the capacity of Architect and Team Leader to provide the technological vision to research, prototype, and develop multiple "key" projects to empower the legacy proprietary UNIFY-VISION/CORBA/ORB based system (Main OTC system for the Thomson Tax & Accounting business unit).
- Led the team to peak performance by challenging and trusting them to be creative on re-thinking existing business processes independently. Built an atmosphere to encourage and recognize their abilities to do the job, rethink the process, and meet deadlines.
- Keep promoting cross-training among onshore/offshore team members to create and active learning environment. Wisely do work assignment to encourage learning of newer technologies and career advancement.
- Managed resources & timelines to expedite critical items and Ongoing Support tickets to enable the business to meet their goals.
- Kept myself in the midst of the technological innovation updates on Computing Science by always stretching my formal education.
  - Architect/Manage/Technical Lead the new Enterprise Monitoring Infrastructure (EOC Tracker Solution) that relies on its own data warehouse (new Data Mart schema) and independent components. Major Components of this new solution are:
    - ◆ EOC Web Tracker Interface (ASP.NET MVC UI)
    - ◆ EOC Log Parser Service (Windows Services)
    - ◆ Tracker Mart - Snapshot of Log files (SQL Server 2008 - New DB Schema).
    - ◆ SharePoint as a Report Repository (MS SharePoint).
    - ◆ SSRS DLLS reused for Reporting and Dashboarding.
    - ◆ A dynamic TRANS\_DATE update functionality to support offshore customers  
(Powershell- Oracle PL/SQL - Stored Procedures).
  - Architect/Technical Lead a Web Billing System that collects actual billing information from the legacy overnight bath process - OTC system. This system comprises the following components.
    - ◆ EOC Overnight Bath Jobs (Vision/CORBA/ORB technologies) o Billing Web Front-End (ASP.NET MVC)
    - ◆ Communication Backbone (MSMQ Messaging).
    - ◆ Document Repository (Oracle 10G).
  - Architect/Technical Lead the exposing of legacy proprietary functionality (Unify/Corba/ORB) as component services. The Vendor proprietary solution for this purpose (black box) was replaced with an in-house WCF Web Services. The proprietary functionality (methods/functions) was exposed as ActiveX components completely developed in-house.
    - ◆ WCF Web Services that exposes the ActiveX client components.
    - ◆ Proprietary middleware based on CORBA/ORB (Unify Object Broker) o ActiveX server components that wraps proprietary vision functions.
  - Prototype Initial: C/C++/C# custom middleware to interface the legacy CORBA/ORB system and the SOA Sabrix service.
  - Prototype Final: ActiveX/COM+ component as middleware to interface the legacy CORBA/ORB system and the SOA Sabrix service.
  - Architect/Technical Lead the real-time addition of the SPA DSXi Address Cleanse services to the legacy proprietary OTC system that uses CORBA/ORB as communication backbone. Note: same technical middleware solution used as previous item (Sabrix).

## Thomson Corporation / Java Lead Software Engineer

JANUARY 2001 - APRIL 2008, Valhalla, NY

Hired to rewrite from the ground up the Checkpoint User Administration platform based on C++ Sun technologies to a J2EE/Java using IBM Websphere technologies.

This system was integrated through Apache Axis SOAP APIs and JMS to other systems like Siebel systems, legacy IBM OS 390 mainframe by using SOA strategies (SOAP over HTTP and JMS approach) and other systems.

- Architected/Lead the full system rewrite using OO and SOA patterns. A web-based multi tier application.
- Developed architectural and functional alternatives as part of feasibility studies for new projects.
- Employed my proven strong academic foundation and skills, to easily get acquainted on emerging computer paradigms.
- Resolved stability and performance issues in current environment improve scalability and troubleshoot multiple problems on several TTA applications.
- Served as architect and technical lead for the XML/XSLT paradigm to generate reports. Used UML to design and present architecture to development group.
- Acted as WebSphere Administrator and Infrastructure Architect. Lead team to develop project plan for enhancements on topology and migration to newer technology versions to support infrastructure for new/existing applications.
- Planned and lead Runtime Migration phase from WAS 5.1 to 6.0. Whole network topology was upgraded on UNIX boxes. HTTP Web Servers, WAS Network Deployment version, Plugins components, node agents and Edge Component software needed to be installed, configured and tuned. This migration process was propagated to each working environment: development, integration, QA, pre-production and finally production.
- Used my expertise in Data Modelling, database design and development including ER diagrams, Dimensional Modelling, Data Warehousing, PL/SQL stored procedures, functions, and triggers using tools such as ERWin, TOAD, Oracle Designer and Rational Rose.

### **Research Institute of America / C++ Software Engineer**

JANUARY 1999 - DECEMBER 2000, 395 Hudson St. New York City

Hired to rewrite the Checkpoint platform from C++ Unix to Windows C++ Visual Studio. Later, a decision was made to move the project to Java.

- Design and Development of multiple C++ modules using Object-Oriented Design in C++ and Design Patterns.
- Wrote multiple stored procedures to support database needs.
- Extensively used scripting languages like Korn Shell, C Shell, and Perl.
- Performed code reviews on C and C++ work performed by contractors.
- Responsible for repairing bugs across a wide range of products in C++ on Unix as a member of Life Cycle Management team.
- Performed migration of Sun Compiler version 5.0, Roguewave tools version 7, Oracle Ver 8.1.6, and Iplanet Webserver Version 4.1 SP1 to Forte Developer 6 Update 1, Roguewave Sourcepro library Version 5, Oracle 8.1.7, iPlanet Webserver Version 6 SP2 correspondingly. This requires software installation, the building of libraries and some refactoring and redesign to have applications running.

### **Telefónica del Perú / Assistant to Vice President For Technological Research & Development.**

SEPTEMBER 1987 - DECEMBER 1994, LIMA-PERU

Worked directly for the Vice President of Operations on assignments related to technical data processing. All nationwide traffic data, produced by analogue and digital telecommunication equipment, was centralized and processed to extract valuable technical information for management decision-making.

Acted as an analyst/designer for developing support information systems on this R&D division. Acted as advisor for formulating feasibility studies for pursuing financing of new projects.

Developed technical studies to get international financial aid and technical support from international organizations like UNPD (United Nations Development Program), ITU (International Telecommunication Union), and ASETA (Regional Telecommunication Union). These studies included Marketing, Financing, Developing, and Production topics.

### **Pontifical Catholic University / Teaching Assistant**

MARCH 1991 - DECEMBER 1992, Lima-Peru

- Math I
- Math II
- General Statistics and,
- Operations Research

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## **Core Education**

### **Pace University / [Doctor. in Computing - Professional Studies](#)**

AUGUST 2008 - MAY 2011, White Plains NY

### **Sacred Heart University / [Master in Business Administration](#)**

SPRING 1995 - FALL 1997, LOCATION

### **Pontifical Catholic University / [MS Computer Information](#)**

JANUARY 1991 - DECEMBER 1992, Lima - Perú

### **San Marcos National University / [BS Industrial Engineering](#)**

JANUARY 1981 - DECEMBER 1986, Lima - Perú

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## **Extended Education**

### **Machine Learning Certification (11 weeks course )- Stanford University**

**Professor:** Andrew Ng. Adjunct Professor, Stanford University; formerly Chief Scientist, Baidu and founding lead of Google Brain

This course provides a broad introduction to machine learning, datamining, and statistical pattern recognition.

#### **Topics include:**

Supervised learning (parametric/non-parametric algorithms, support vector machines, kernels, neural networks).

Unsupervised learning (clustering, dimensionality reduction, recommender systems, deep learning).

Best practices in machine learning (bias/variance theory; innovation process in machine learning and AI).

The course draws from numerous case studies and applications to learn how to apply learning algorithms to build smart robots (perception, control), text understanding (web search, anti-spam), computer vision, medical informatics, audio, database mini

and other areas.

### **IBM Data Science Professional Certificate**

December 2018 - March 2019, Online

- Course 1: What is Data Science?
- Course 2: Open Source tools for Data Science
- Course 3: Course 1: Data Science Methodology
- Course 4: Python for Data Science
- Course 5: Databases and SQL for Data Science
- Course 6: Data Analysis with Python
- Course 7: Data Visualization with Python
- Course 8: Machine Learning with Python
- Course 9: Applied Data Science Capstone

### **New York University, Master Program Computer Science School**

SPRING 1995 - FALL 1997, LOCATION

- Advanced Object Oriented C++, Fall semester 1999. Grade A
- Advance Topics Object Oriented C++, Spring semester 2000. Grade A
- Advanced Java -- Summer semester, Grade A
- Advanced Special Topics in Java -- Fall semester, Grade A.

### **Thomson University - Prof. Cert. in Object Oriented Technologies**

1999 - 2000, 395 Hudson St., New York

- Programming in Java -- 40 hours
- Advance Java Programming -- 40 hours
- Enterprise Java Beans -- 40 hours
- Object-Oriented Analysis & Design using UML -- 40 hours
- Fundamentals of XML -- 16 hours
- Advanced XML -- 16 hours
- Advanced PL/SQL -- 24 hours
- Design Patterns in Java -- 20 hours
- Computer Networking -- 40 hours
- Linux System Administration -- 30 hours

### **Japan International Agency (NTT/Fujitsu Corporations)**

Diploma in "Information Systems Analyst/Designer"

1993-1994 (1 year) - Tokyo - Japan

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## **Publications**

Publication: "A Reusable Software Framework for Client-Service Delayed Web Transactions". Draft to earn a Doctor degree in Computing.

Dissertation defense pending.

Publication: "Intelligent Systems to Enhance Decision making in the Stock Market." - Thesis to earn a Master of Science degree in Computer Science. It was constructed using C++ language.

Publication: "Feasibility Study to Develop an Industrial Prototype of a UHF Digital Telecommunication Radio with Native Peruvian Technology" Thesis to earn a Professional Title as an Industrial Engineer.