

CON5884: The State of Analytics and Machine Learning

Shyam Varan Nath, Director IoT & Cloud, BIWA User Group

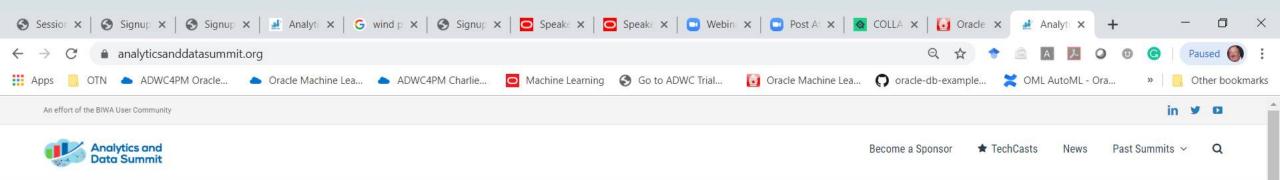
Dan Vlamis, CEO - President, Vlamis Software Solutions, Inc.



Agenda – The State of Analytics and Machine Learning

- Background on BIWA and Analytics and Data Summit
- Expertise Snippets
 - 4 TechCasts
- Analytics and Data Summit 2020
- TechCasts
 - Earn a free registration to AnD Summit
- Join! (Free)







SAVE THE DATE ANALYTICS AND DATA SUMMIT 2020

All Analytics. All Data. No Nonsense. February 25-27, 2020

Call for Speakers Coming Soon!

LEARN ABOUT OUR NEW TECHCAST SERIES





Analytics and Data Summit

- Founded summer, 2006
- BIWA Summit 2007 at Oracle, Reston, VA
- BIWA Summit 2008 at Oracle, Redwood Shores, CA
- BIWA Summit 2013, restarted in Redwood Shores, CA
- BIWA Summit 2014, 2015, 2016, 2017 at Oracle, Redwood Shores, CA
- Analytics and Data Summit 2018, 2019 at Oracle, Redwood Shores, CA
- Managed by Volunteer Board Members and Oracle Advisors



Analytics and Data Summit 2019 Worldwide!



~400 worldwide attendees from 25 countries, 30 US states





2 Example Agenda Days @ AnD



TechCast Series

★ TechCasts Submit Your Abstract



Our New Analytics and Data TechCast Series

To share knowledge, expertise, and ideas, the Oracle BIWA User Community is announcing the new Analytics and Data TechCast Series. The TechCast Series will occur every other Thursday at 12pm ET and last 30 minutes.

The objective of the Analytics and Data TechCast Series is the sharing of useful, practical applied Oracle technical expertise for the benefit of all; no sales pitches. We all use Oracle technologies, but can all grow by learning new features, tips and tricks, best practices, new and novel and interesting use cases. New TechCast abstracts can always be entered using these TechCast categorizations:

- Artificial Intelligence and Machine Learning
- Big Data
- Business Analytics
- Data Warehousing and ETL
- Emerging Technologies
- General
- Spatial and Graph

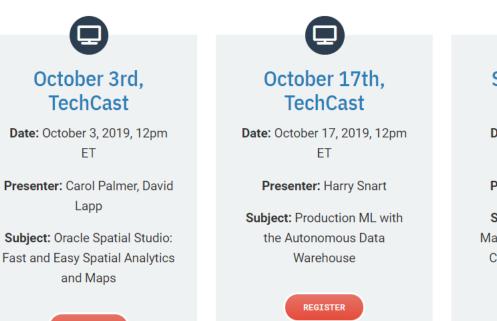




TechCast Series

* TechCasts Submit Your Abstract





September 5th, TechCast

Date: September 5, 2019, 12pm ET

Presenter: Philippe Lions

Subject: Oracle Analytics Makes the Most of Database Capabilities with Evaluate Function

REPLAY



Analytics and Data Summit Feb 25-27, 2020

October 3rd,

TechCast

EΤ

Lapp

and Maps

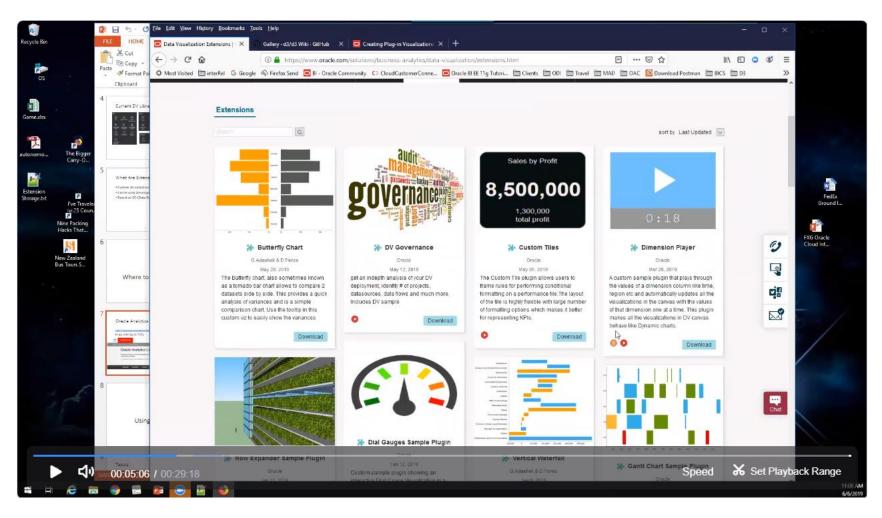
REGISTER

TechCast Series

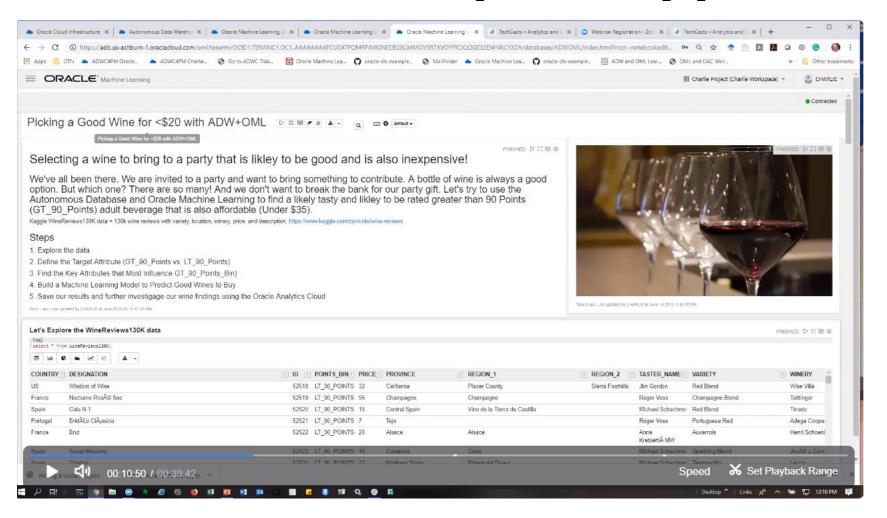
2019 TechCast Archive

Date	Title	Speaker(s)	Video Replay	Slides
June 6, 2019	Extending Oracle Analytics Cloud's Data Visualization Using Custom Plug- ins	Wayne Van Sluys	Video	Slides
June 20, 2019	Picking a Good Wine for <\$20 Using ADW, Machine Learning and Analytics Cloud	Charlie Berger, Dhvani Sheth, Siddesh C Prabhu Dev Ujjni	Video	Slides
July 11, 2019	Developing an RDF4J Adapter for Oracle Spatial and Graph – SPARQL focus	Timea Turdean, Software Engineer, Semantic Web Company	Video	Slides
July 25, 2019	What's New in OAC 105.3.0	Dan Vlamis	Video	Slides
Aug 8, 2019	Autonomous Anomaly Detection for Dense-Sensor IoT Prognostics	Kenny Gross, Al Architect, Oracle	Video	Slides
Aug 22, 2019	Revisiting Market Basket Analysis with SQL Pattern Matching	Shankar Somayajula, Architect – Advanced Analytics, Industry Data Models, Oracle	Video	Slides

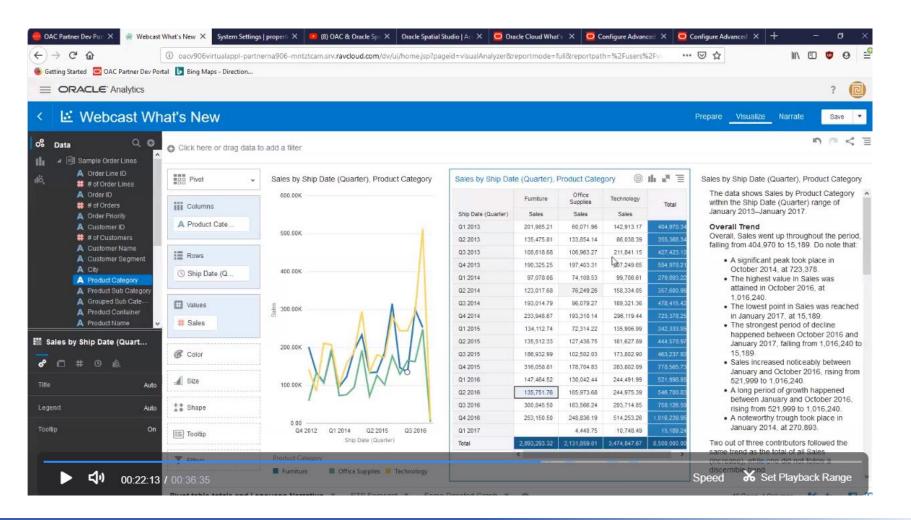














MBA Revisited

Transaction Data augmented with "Tags"

TRX_ID	TRXLI_SEQ	M8_PROD_LEVEL_ID (M8_PROD_LEVEL	M8_PROD_ID	ME_ORIG_PROD_ID HE_PROD_NM	\$ UNETS	QTY	AMT (
3	1	liten	1000112	112 q	1	1	60
3	2	liten	1000105	105 p	2	4	100
3	3	liten	1000008	8 a	1	1	10
3	4	liten	1000012	12 b	10	1	180
3	5	1 item	1000015	15 c	10	5	270
3	6	liten	1000115	115 r	4	1	280
3	7	24 custspendtrx	250002	250002Normal Spend: 10% to 90% (220\$ < trx_amt < 948\$	28	13	900
3	8	104 trxtod	550001	550001 EarlyHourSales	28	13	900
1	1	liten	1000112	112 q	6	2	360
4	2	liten	1000115	115 r 🕞	4	2	252
4	3	24 custspendtrx	250002	250002 Normal Spend: 10% to 90% (2205 < trx_amt < 9485	10	4	612
4	4	104 trxtod	550002	550002 EveningHourBuys	10	4	612
5.	1	liten	1000021	21 d	4	1	160
5	2	litem	1000112	112 q	6	1	360
5	3	liten	1000012	12 b	8	2	160
5	4	liten	1000115	115 r	4	1	280
S	5	24 custspendtrx	250001	250001 High Spend: Top 10% (trx_amt >= 948\$)	22	5	960
5	6	104 trxtod	550004	550004 SiestaTimeTrends	22	5	960
6	1	liten	1000012	12b	6	2	120
6	2	liten	1000015	15 c	4	2	100

• Rules of type "IF ... THEN ... "

RULE_ID ANTCONS	ANTCONS_ID	ANTCONS_CSV	ANTCONS_ID_CSV
100 b,z => p	1000012,1000125 => 1000105	b,z,p	1000012,1000125,1000105
101 b,p => z	1000012,1000105 => 1000125	b,p,z	1000012,1000105,1000125
102 q,r => b	1000112,1000115 => 1000012	q,r,b	1000112,1000115,1000012
103b,r => q	1000012,1000115 => 1000112	b,r,q	1000012,1000115,1000112
104 b,q => r	1000012,1000112 => 1000115	b,q,r	1000012,1000112,1000115
105 q, z => b	1000112,1000125 => 1000012	q,z,b	1000112,1000125,1000012

with more rules involving the added tags ...

RULE_ID () ANTCONS	() ANTCONS_ID			
10 Normal Spend: 10% to 90% (220\$ < trx_amt < 948\$) => 6	a 250002 => 100000			
73 Normal Spend: 10% to 90% (220\$ < trx_amt < 948\$) => :	r 250002 => 100011			
41 Low Spend: Bottom 10% (trx_amt <= 220\$) => c	250003 => 100001			
27 Low Spend: Bottom 10% (trx_amt <= 220¢) => b	250003 => 100001			
75 High Spend: Top 10% (trx_amt >= 948¢) => z	250001 => 100012			
47 High Spend: Top 10% (trx amt >= 9484) => d	250001 => 100002			

RULE_ID	ANTCONS	ANTCONS_ID			
53	SiestaTimeTrends => d	550004 => 1000021			
51	LateNightTrx => d	550003 => 1000021			
69	EveningHourBuys => q	550002 => 1000112			

Speed 🛛 😽 Set Playback Range



4) 00:08:39 / 00:31:34

Analytics and Data Summit Feb 25-27, 2020

6

Analytics and Data Summit Volunteers

- BIWA User Community BoD Leadership
 - Dan Vlamis, Vlamis Software
 - Matthew Vranicar, DataRoad
 - Kirby Lunger, Performance Architects
 - Jay Mason, M&S Consulting
 - Peter Koutroubis, ERPA Group
 - You next year? Ask board ribbons
- Conference Coordinators
 - Carrie Dayton, CDEC
 - Jackie Hunter, CDEC

Oracle Employee Advisors

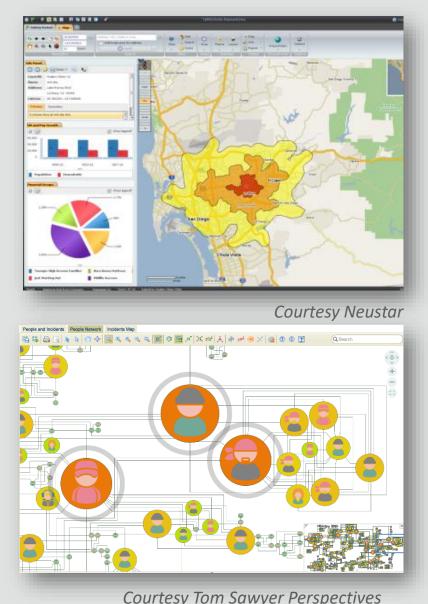
- Charlie Berger
- Mark Hornick
- Emily Cikovsky
- Shyam Varan Nath

Conference Committee

- Members from Spatial SIG
- Cathye Pendley, Vlamis Software
- Brandon Jones, M&S Consulting
- Ervin McFadden, independent
- Holly Krenz, Alaska Dept. of Fish and Game
- Arijit Das, Naval Postgraduate School



Spatial and Graph Analysis is about relationships



Are things in the same location? Who is the nearest? What tax zone is this in? Where can deliver in 35 minutes? What is in my sales territory? Is this built in a flood zone?

 Which supplier am I most dependent Upon? Who is the most influential customer? Do my products appeal to certain communities? What patterns are there in fraudulent behavior?

Spatial and Graph enhances business analytics

- Spatial and graph technologies enable insights into relationships
- Exploit location and social information into business workflows



- Manage and analyze data directly from Oracle Database and Oracle Analytics Cloud platforms
- Spatial and graph enhances Analytics, Big Data, Machine Learning
 - Graph: in Gartner's top 5 Analytics Trends 2019
- · Analytics, cloud services and developer-oriented capabilities
 - New: Spatial Studio, Graph Cloud Service
- Check out sessions and demos at OOW/Code One => bit.ly/SpatialGraphOOW19

The Spatial & Graph SIG User Community Now part of BIWA User Group

We are a vibrant community of customers and partners that connects and exchanges knowledge online, and at conferences and events.



Meet us at OpenWorld! Monday-Wednesday Moscone West, Level 3, User Group area at the *BIWA/Analytics Community* table

Spatial & Graph Sessions at OOW/Code One <u>bit.ly/SpatialGraphOOW19</u>

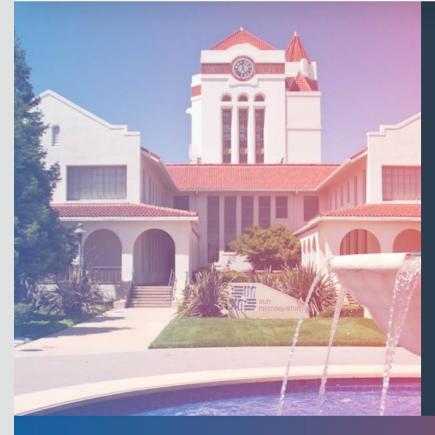
Join us online tinyurl.com/oraclespatialcommunity



@oraspatialsig







SAVE THE DATE ANALYTICS AND DATA SUMMIT 2020

All Analytics. All Data. No Nonsense. February 25-27, 2020

Call for Speakers Now Open!

@AnalyticAndData

SIGN UP FOR OUR NEWSLETTER

Formerly the BIWA Summit with the Spatial and Graph Summit.

analyticsanddatasummit.org

Seeking customer use cases and technology sessions Dedicated Spatial & Graph track with 20+ sessions

Resources - Get Started





- Oracle Spatial and Graph product pages oracle.com/technetwork/database/options/spatialandgraph
- YouTube channel youtube.com/c/OracleSpatialandGraph
- Blog examples, tips & tricks

blogs.oracle.com/oraclespatial | blogs.oracle.com/bigdataspatialgraph

SpatialHannes

in Oracle Spatial and Graph Group

Spatial at OOW and Code One 2019 View this list at <u>bit.ly/SpatialGraphOOW19</u>



Sessions

Date/Time	Title	Location
Monday, Sept. 16		
2:30 p.m 3:15 p.m.	Harnessing Location with Node.js and Oracle Database [DEV3108]	Moscone South - Room 306
Tuesday, Sept. 17		
11:30 a.m 12:15 p.m.	Analyzing Location-based Patterns with Python and Oracle Database [DEV3108]	Moscone South - Room 304
5:00 p.m 7:00 p.m.	Python Development on Oracle Autonomous Transaction Processing Hands On Lab[HOL6517]*Please bring your own laptop	Moscone West - Room 3011A
Wednesday, Sept. 18		
4:45 p.m 5:30 p.m.	Taking You New Places: Oracle Analytics, Maps, and Spatial Working Together [CON6387]	Moscone South - Room 209
Thursday, Sept. 19		
9:00 a.m 9:45 a.m.	Maps and Spatial Databases: How To Use Them [TRN4756]	Moscone South - Room 152B

Spatial at OOW and Code One 2019 View this list at <u>bit.ly/SpatialGraphOOW19</u>



Meet the Experts At the Code One Groundbreakers Hub, Moscone South Level 1

Tuesday, Sept. 17		
4:30 pm - 5:20 pm	Oracle Spatial Studio: Fast and Easy Spatial Analytics and Maps	Lounge C, Code One Groundbreakers Hub, Moscone South level 1
Wednesday, Sept. 18		
2:30 pm - 3:20 pm	How To Use Maps and Spatial Databases	Lounge D, Code One Groundbreakers Hub, Moscone South level 1



Graph at OOW and Code One 2019 View this list at <u>bit.ly/SpatialGraphOOW19</u>



Sessions

Date/Time	Title	Location
Tuesday, Sept. 17		
8:45 a.m 10:45 a.m.	Using Graph Analytics for New Insights [TUT4328]	Moscone South - Room 204
11:15 a.m 12:00 p.m.	New Tools for the Fight Against Financial Crime [CON6222]	Moscone West - Room 3004
12:30 p.m 1:15 p.m.	Using Graph Analysis and Fraud Detection in the Fintech Industry [Paysafe customer session]	Moscone South - Room 152C
12:30 p.m 1:15 p.m.	Blazing-Fast Distributed Graph Query Processing: 100x as Fast as Spark [DEV3712]	Moscone South - Room 307
3:15 p.m 4:00 p.m.	Introducing Oracle Graph Cloud: Automating Graph Analysis [TRN4754]	Moscone South - Room 159B



Graph at OOW and Code One 2019 View this list at <u>bit.ly/SpatialGraphOOW19</u>



Sessions

Date/Time	Title	Location
Wednesday, Sept. 18		
10:00 a.m. – 10:45 a.m.	Graph Databases and Analytics: How To Use Them [TRN4755]	Moscone South - Room 152C
10:00 a.m. – 10:45 a.m.	Setting Up Modern Anti-Money-Laundering Solutions to Service Wholesale [CON6223]	Moscone West - Room 3004
11:15 a.m 12:00 p.m.	Demystifying Graph Analytics for the Nonexpert [CON5503]	Moscone South - Room 156B
1:30 p.m 2:15 p.m.	Traversing and Querying Graphs with PGQL and Gremlin with Oracle Spatial and Graph [DEV4084]	Moscone South - Room 202

Meet the Experts At the Code One Groundbreakers Hub, Moscone South Level 1

Wednesday, Sept. 18		
1:30 pm - 2:20 pm	Graph Database and Analysis	Lounge C, Code One Groundbreakers Hub,
2:30 pm - 3:20 pm	Graph Cloud Service: Automating Graph Analysis	Moscone South level 1

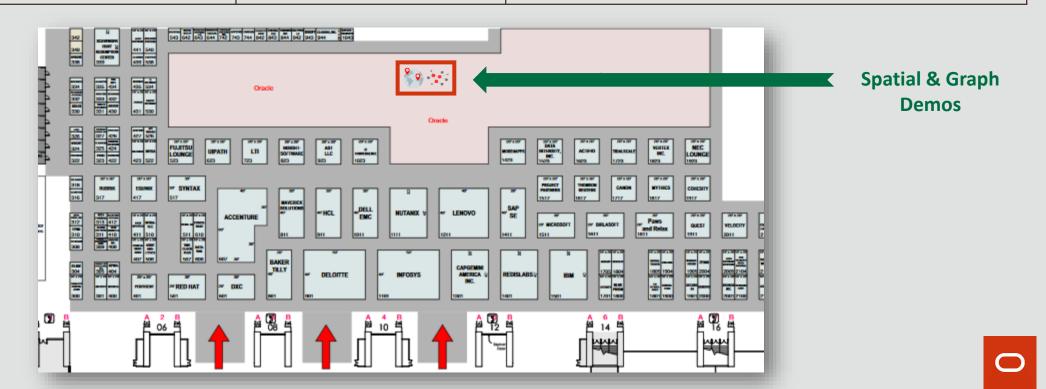


Spatial and Graph at OOW and Code One 2019 View list at <u>bit.ly/SpatialGraphOOW19</u>



Demos

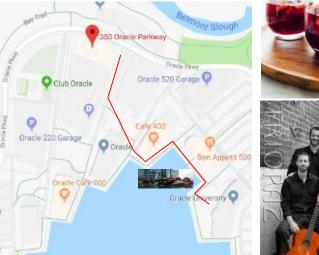
Date/Time	Title	Location
Monday 10:00 am – 4:00 pm	Spatial and Graph:	Moscone South Exhibit Hall ('The Exchange')
Tuesday 10:30 am – 5:30 pm	Database, Analytics and	 Oracle Demogrounds > Data Management area >
Wednesday 10:00 am- 4:30 pm	Cloud	Kiosk # ODB-017



Conference Highlights

See analyticsanddatasummit2019.sched.com for schedule

- Tuesday
 - Opening keynote: Jon Walton, CIO County of San Mateo Intelligent County and City
 - Lunch with popular "Lightning rounds" get food and come to Auditorium
 - Closing day keynote: Bruno Aziza, Group VP, :The Great Analytics Adventure"
 - Reception/Party: Building 600, 6-8
- Wednesday
 - Regular session day
 - Lunch "Birds of a Feather"
 - Networking Reception
- Thursday
 - Regular session day
 - Lunch "Feedback session" during 2nd half of lunch. Learn about BIWA and help us improve Analytics and Data Summit next year







Conference Highlights

See analyticsanddatasummit2019.sched.com for schedule







Analytics and Data Summit 2019

Conference Highlights

Hands on Labs Taught by Expert Users







Analytics and Data Summit 2019

Always Seeking Active Volunteers!

- Join Analytics and Data User Community (on website)
- Share your expertise—Deliver a TechCast
- Join LinkedIn Group Oracle BIWA SIG
- See Conference site for archives and updates
 - <u>http://analyticsanddatasummit.org</u>
 - Analytics and Data Summit 2020 Feb 25-27, 2020

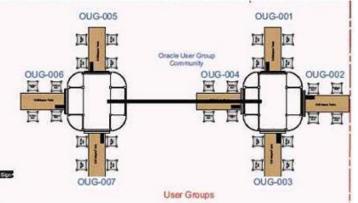
Volunteer – Talk to any BoD member

Visit Our Booth!

- Moscone West, 3rd Floor User group area
- Booth Xyz
- Visit with our volunteers
- Get scanned at our booth







Stay in Touch!



Sign up to Stay in Touch!

Fill in this information so we can keep you informed of future Techcasts and updates on our annual conference.

* Email

* First Name

* Last Name

Phone Number

Company

Job Title

