

# Tony Nahra

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## SKILLS

**Summary:** 25 years experience developing software, managing systems, reporting, planning, evaluating and budgeting  
**Technologies:** MS SQL, PowerBI, Epic systems, Amazon AWS, XML/XSL, HTML5, Web Services, Excel, Access, SharePoint  
**Programming Languages:** Python, Pandas, ETL, OLAP, Tableau, C#, JavaScript, PHP, SQL, VBA, Office365 Add-ins

## PROFESSIONAL EXPERIENCE

### UI Health Care: CCA division

Jul. 2023 – Present

Coralville, Iowa, 52241, USA

*Application Developer*

Application development and administration of various systems:

- Epic Unified Communication
- Voalte administration
- MS Teams and Sharepoint
- Message Media
- Securitas RTLS

Member of two governance groups: MS-Teams and Message Media

### Patient Education Institute

Jul. 2001 – June 2023

Coralville, Iowa, 52241, USA

*Senior Analyst Programmer*

Interactive Tutorial Engine/Player with LMS integration:

- Designed and developed a tutorial player with voice narration, questions, feedback, glossary, scoring features and multilingual capabilities to improve learning outcomes and increase user engagement
- Database Driven LMS with completion records, response analysis and usage reporting
- Worked with major healthcare institutions: NLM, Kaiser Permanente, Cleveland Clinic, HCA and others
- Managed projects across continents and in different languages
- Generated training material and plans

### Abu Dhabi Investment Authority

Feb. 1994 – Jun. 2001

Abu Dhabi, U.A.E.

*IT Education Consultant*

Financial systems data analysis:

- Assisted financial analysts build models, data warehouse, OLAP and drill down
- Automated tasks and consolidated data from Reuters, Bloomberg and other sources
- Generated periodic reports, statistical regression, back-testing, and time-series seasonality analysis

## CERTIFICATION

Epic Systems	EpicCare Inpatient Clinical Documentation	Oct 2024
Epic Systems	Data Courier Mover Badge	Nov 2024

## EDUCATION

American University of Beirut	Beirut, Lebanon	Aug 1988
Bachelor of Engineering	Electrical Engineering	

More details and sample projects at <https://tonynahra.github.io/cv>

# Screenshots of sample projects that I designed and developed

A RTLS DrillDown report to show the count of RTLS tags per category.

Table

Count

Asset

Serial\_Number

Manufacturer

Business Statu

Primary Catego

Category 3

Department 1

Department 2

Department 3

Department 4

Department 5

Group 1

Model

Rating

Category 1

Category 2

Manufacturer (120)

Filter values

Select All Select None

☒ (1182)

☒ 2141 (8)

☒ Stryker (1)

☒ 3M (5)

☒ ALCO (236)

☒ ASC - SmartNav (1)

☒ Actuated Medical (1)

☒ Alco (10)

☒ Ambu (1)

☒ Anacom-MedTek (8)

Apply Cancel

Category 2	Totals
	3,496
Equipment	37
Feeding Pumps	169
Heat Therapy Pumps	5
Infusion Pump	5,140
Kangaroo ePump	1
Large Volume Pump	4
Medical Devices	1,142
PC Unit	1
Pacemakers	1
Patient Warmers	3
Phototherapy Lights	35
Surgical Traction Device	5
Video Laryngoscope (Main OR)	1
null	10,041
Totals	20,081

Voalte report to calculate monthly average Time\_To\_Read messages then use UNION to combine with other months

```
SELECT
  "04-24" AS [ "MM-YY" ],
  int( Max(
    24 * 60 * 60 * ( IowaText_Apr2024.Read - IowaText_Apr2024.Delivered )
    ) / 3600 / 24 ) AS Max_TTR_days
FROM
  IowaText_Apr2024
WHERE
  IowaText_Apr2024.Delivered > 0 AND IowaText_Apr2024.Read > 0 AND IowaText_Apr2024.[Distribution Type] = "One-to-One"
```

SELECT \* from Avg\_TTR\_Jan\_2024 Union SELECT \* from Avg\_TTR\_Feb\_2024 Union SELECT \* from Avg\_TTR\_Mar\_2024 UNION SELECT \* from Avg\_TTR\_Apr\_2024

A DrillDown RTLS report using the LastSeen field to analyze who has not been using their RTLS tag per Dept. / Building

```
28 def DateRange12Month(X):
29     if X > 180 and X < 365 :
30         return "X"
31     else:
32         return ""
33 def DateRangeInYear(X):
34     if X > 365 :
35         return "X"
36     else:
37         return ""
38
39 GRP=dataset.groupby(['Department']).agg(Cnt=('TagID', len), Last=('LastDate', np.max))
40 GRP["LastSeen"] = ( dt.datetime.now() - GRP['Last'] ).dt.days
41 GRP["Within_1_month"] = GRP['LastSeen'].apply(DateRange1Month)
42 GRP["Within_3_months"] = GRP['LastSeen'].apply(DateRange3Month)
43 GRP["Within_year"] = GRP['LastSeen'].apply(DateRange12Month)
44 GRP["more_than_year"] = GRP['LastSeen'].apply(DateRangeInYear)
45 GRP = GRP.drop( ['Last'] , axis=1)
```

Code used to  
generate the  
PIVOT below

Table	Count	↕ ↔	Last_seen_within_1_month	Last_seen_within_3_
StaffName	Department			
TagID				
Location				
LastDate				
LastSeen				

	Last_seen_within_1_month		X	
	Last_seen_within_3_months		X	
	Last_seen_within_year		X	Totals
Department	Last_seen_more_than_year	X		
		87	14	14
1JPW			1	1
2JCP				1
2JPE				3
2JPW		1	2	10
2RCP			1	1

Count numbers  
are clickable to  
drill into TagIDs

Table	Name	Unit
Count	AT	
Building	AT	
	Building	--D --M- -MD 1-D 1MD null Totals
	Ambulatory Clinics	57 68 449 135 709
	Anesthesia	1 38 91 70 200
	Capital Management	3 3
	Cardiothoracic Surgery	2 1 3
	Care Coordination Division	2 9 13 24
	Carver College of Medicine (CCOM)	6 2 3 11
	Center for Disabilities and Development	4 14 34 22 74
	Central Sterilizing Services	6 149 48 203
	Clinical Quality, Safety & Performance Improvement	8 2 16 26
	Compassus	2 2
	Compliance	2 2
	Dermatology	2 5 3 5 15
	Emergency Medicine	9 8 142 71 230
	Engineering Services	40 5 8 53
	Environmental Services	1 6 211 7 225
	Family Medicine	1 39 8 45 93
	Food & Nutrition Services	3 45 149 49 246
	Guest Services	7 54 2 63
	HCIS	21 96 53 71 241
	Heart and Vascular Center (HVC)	6 31 113 44 194
	Holden Comprehensive Cancer Center (HCCC)	21 61 89 98 269
	Hospital Administration	3 18 7 6 34
	Hospital Dentistry	1 6 7
	Housewide Services	5 405 84 861 1,355
	Inpatient Units	1 277 7 285
	Institute for Clinical and Translational Science	1 3 7 13 24
	Integrated Call Center (ICC)	18 3 28 3 52
	Internal Medicine	7 129 21 83 240
	Iowa Rehab Hospital	8 8
	Iowa River Landing	5 12 374 97 488
	Joint Office of Patient Financial Services	65 4 31 6 106
	Marketing and Communication	6 6

Voalte PIVOT  
report for who  
is using which  
format:  
1: VoalteOne  
M: Mobile  
D: Desktop

## MS-SQL stored procedures that I developed for an online training system documenting completion

```
module_info.Name as Title,
module_info.Type as Type,
@CID as ClientID,
dbo.Specialties.SPname as DespSpecialty
FROM
dbo.Module_Info
INNER JOIN dbo.Module_Specialty ON dbo.Module_Info.ModuleID = dbo.Module_Spe
INNER JOIN dbo.Module_Type ON dbo.Module_Info.Type = Module_Type.Indx
INNER JOIN dbo.Specialties Spe ON dbo.Module_Info.Specialty = Spe.SP
INNER JOIN dbo.Module_Language ON dbo.Module_Info.Lang = dbo.Module_Language
INNER JOIN dbo.Specialties ON dbo.Module_Specialty.Specialty = dbo.Specialties
WHERE
(
    dbo.Module_Info.ModuleCODE = @FiltK
)
and (dbo.Module_Info.Status <> 3) else if @SpDest = -2
SELECT
    TOP 100 PERCENT M.ModuleID AS ModuleID,
    M.ModuleCODE,
    M.Lang,
    1 AS Licensed,
    Specialties_1.SPName AS Specialty,
    dbo.Module_Language.[Language],
    M.Name AS Module_Title,
    MT.M_Type AS asType,
    dbo.LicensedModules.ClientID,
    Specialties_1.SP AS DestSpecialty
FROM
    dbo.Module_Info M
    INNER JOIN dbo.Module_Language ON M.Lang = dbo.Module_Language.Indx
    INNER JOIN dbo.Module_Type MT ON M.Type = MT.Indx
    INNER JOIN dbo.Specialties Spe ON M.Specialty = Spe.SP
    INNER JOIN dbo.LicensedModules ON M.ModuleID = dbo.LicensedModules.ModuleID
    INNER JOIN dbo.Specialties Specialties_1 ON dbo.LicensedModules.Specialty =
WHERE
(
    M.Type = ISNULL(@Type, M.Type)
)
AND M.Status <> 3
AND dbo.LicensedModules.ClientID = @CID
and M.Specialty = isnull(@FiltS, M.Specialty)
and M.[Lang] = isnull(@FiltL, M.[Lang])
and M.ModuleCode + M.Name + M.keywords like '%' + isnull(@FiltK, '%') + '%'
ORDER BY
    M.Sorting,
    M.Name else
SELECT
    TOP 100 PERCENT M.ModuleID AS ModuleID,
    M.ModuleCODE,
    M.Lang,
```

```
SQLQuery5.sql...istrator (62)* SQLQuery4.sql...istrator (60) SQLQuery3.sql...istrator (59) SQLQuery2.sql...istrator (57) SQLQuery1.sql...istrator (53)
USE [XPOL_03-19-2015]
GO
/***** Object: StoredProcedure [dbo].[CP_Client_LM] Script Date: 02/15/2016 19:46:59 *****/
SET ANSI_NULLS OFF
GO
SET QUOTED_IDENTIFIER ON
GO
ALTER PROCEDURE [dbo].[CP_Client_LM]
(
    @CID as int,
    @UID as int,
    @SP as int,
    @Lang int,
    @KW as varchar(50)
)
AS
Declare @Imitate int
select @Imitate=ImitateID from Client_Info where ClientID=@CID
if @Imitate is NULL
set @Imitate = @CID
if @SP = 0
SELECT DISTINCT
    dbo.LicensedModules.ModuleID, dbo.Module_Info.ModuleCODE, ISNULL(dbo.LicensedModules.Other.CustomName, dbo.Module_Info.Name)
    (SELECT Indx
     FROM Log_Assign
     WHERE Log_Assign.M = LicensedModules.ModuleID AND Log_Assign.C = @CID AND Log_Assign.U = @UID) AS Licensed
    (SELECT TOP 1 Indx
     FROM LicensedModules AS SUBLM
     WHERE SUBLM.ModuleID = LicensedModules.ModuleID AND SUBLM.ClientID = @Imitate ) AS LMIndx
FROM
    dbo.LicensedModules INNER JOIN
    dbo.Module_Info ON dbo.LicensedModules.ModuleID = dbo.Module_Info.ModuleID LEFT OUTER JOIN
    dbo.LicensedModules_Other ON dbo.LicensedModules.Indx = dbo.LicensedModules_Other.LM_Indx
WHERE (dbo.Module_Info.Status=1) And (dbo.Module_Info.Lang = isnull(@Lang, dbo.Module_Info.Lang )) and (dbo.LicensedModules.Client
else
SELECT
    dbo.Module_Info.ModuleID,
    dbo.Module_Info.ModuleCODE,
```

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. On the left, the 'Object Explorer' pane shows a tree view of the database's 'System Stored Procedures'. The main window displays the SQL code for a stored procedure named 'SQLQuery6.sql...istrator (63)\*'. The code defines several input parameters: @SID (int), @ModuleID (int), @Logo (tinyint), @LogoT (varchar(10)), @Cnt (int), @Title (varchar(100)), @TitleTmp (varchar(100)), @RunModule (varchar(2000)), @Media (CHAR(1)), @MM (tinyint), @YY (smallint), @ImitateID (int), and @InterfaceEnd (smallint). It also includes optional parameters @AutoUpdate (tinyint), @ShortCode (varchar(7)), and @LastVer (varchar(2)). The procedure logic includes selecting data from 'LicensedModules' and 'Module\_Info' tables, inserting into 'user\_info', and selecting from 'client\_info' based on the provided parameters. It also includes conditional logic for @AutoUpdate and @InterfaceEnd.

## mySql ( that does not support PIVOT function ) query for cross tabulation

```
2  SELECT
3      TOP 100 PERCENT Specialties.SPName AS Specialty,
4      SUM( CASE WHEN module_info.Lang = 1 THEN 1 ELSE 0 END ) AS English,
5      SUM( CASE WHEN module_info.Lang = 2 THEN 1 ELSE 0 END ) AS Spanish,
6      SUM( CASE WHEN module_info.Lang = 3 THEN 1 ELSE 0 END ) AS Arabic,
7      SUM( CASE WHEN module_info.Lang = 4 THEN 1 ELSE 0 END ) AS Vietnamese
8  FROM
9      LicensedModules
10     INNER JOIN Module_Info ON LicensedModules.ModuleID = Module_Info.ModuleID
11     INNER JOIN Specialties ON LicensedModules.Specialty = Specialties.SP
12     INNER JOIN Module_Language ON Module_Info.Lang = Module_Language.Indx
13 WHERE LicensedModules.ClientID = 91
14 GROUP BY
15     Specialties.SPName,
16     Specialties.Type,
17     Module_Info.Status
18 HAVING
19     Specialties.Type = 1 AND Module_Info.Status = 2
20 ORDER BY
21     Specialty
```

```
2  ALTER PROCEDURE [CP_Survey_Analysis]
3  @ClientID smallint,
4  @ModID varchar(10),
5  @d1 smalldatetime,
6  @d2 smalldatetime AS
7  SELECT
8      TOP 100 PERCENT Activity_Responses.QuestionNumber,
9      Activity_Responses.UserResponse,
10     COUNT(Activity_Responses.Indx) AS cnt,
11     Module_Questions.Text AS Question,
12     Module_Answers.Text AS Reply,
13     Log_Activity.ClientID
14 FROM
15     Activity_Responses
16     INNER JOIN Log_Activity ON Activity_Responses.ActivityIndex = Log_Activity.Indx
17     INNER JOIN Module_Info ON Log_Activity.ModuleID = Module_Info.ModuleID
18     INNER JOIN Module_Questions ON Activity_Responses.QuestionNumber = Module_Questions.Qcode
19     AND Module_Info.ModuleCODE = Module_Questions.ModuleCode
20     INNER JOIN Module_Answers ON Activity_Responses.QuestionNumber = Module_Answers.Qcode
21     AND Activity_Responses.UserResponse = Module_Answers.Answer
22     AND Module_Info.ModuleCODE = Module_Answers.ModuleCode
23 WHERE
24     Activity_Responses.DT BETWEEN @d1 AND @d2
25 GROUP BY
26     Activity_Responses.QuestionNumber,
27     Activity_Responses.UserResponse,
28     Module_Info.ModuleCODE,
29     Module_Questions.Text,
30     Module_Answers.Text,
31     Log_Activity.ClientID
32 HAVING
33     Log_Activity.ClientID = @ClientID
34     AND Module_Info.ModuleCODE = @ModID
35 ORDER BY
36     Activity_Responses.QuestionNumber,
37     Activity_Responses.UserResponse
```



# Database export to XML for a MedlinePlus static website project

MedlinePlus: Interactive Health Tutorials - Microsoft Internet Explorer

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Address http://www.nlm.nih.gov/medlineplus/tutorial.html Go Links

Site navigation

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### Interactive Health Tutorials

The tutorials listed below are interactive health education resources from the [Patient Education Institute](#). Using animated graphics each tutorial explains a procedure or condition in easy-to-read language. You can also listen to the tutorial.

**NOTE:** These tutorials require a special Flash plug-in, version 4 or above. If you do not have Flash, you will be prompted to obtain a free download of the software before you start the tutorial.

- Diseases and Conditions**
  - [Abdominal Aortic Aneurysm](#)
  - [Acne](#)
  - [Allergies to House Dust Mites](#)
  - [Alopecia](#)
  - [Amyotrophic Lateral Sclerosis \(ALS\)](#)
  - [Angina](#)
  - [Anthrax](#)
  - [Asthma](#)
  - [Arrhythmias](#)
  - [Arthritis](#)
  - [Atrial Fibrillation](#)
  - [Back Pain](#)
  - [Brain Cancer](#)
  - [Bell's Palsy](#)
  - [Breast Cancer](#)
  - [Burns](#)
- Tests and Diagnostic Procedures**
  - [Barium Enema](#)
  - [Bone Densitometry](#)
  - [Breast Lump - Biopsy](#)
  - [Colonoscopy](#)
  - [Coloscopy](#)
  - [Coronary Angiography and Angioplasty](#)
  - [CT Scan \(CAT Scan\)](#)
  - [Cystoscopy](#)
  - [Diagnostic Laparoscopy](#)
  - [Echocardiogram](#)
  - [Echocardiography Stress Test](#)
  - [Intravenous Pyelogram \(IVP\)](#)
  - [Knee Arthroscopy](#)
  - [Mammogram](#)
  - [MRI](#)
  - [Myelogram](#)

Start Messenger Windows Explorer Internet Explorer

### X-Plain Online

Account	Edit	Specialty	Modules	Offline	Promotions	Views	Tools
Path: root			+	Create Pin			
+			Addiction Medicine	Select Favorites List			
+			Advance Directives	Select Frequently Used			
+			Alternative Medicine	Module Updates			
+			Anesthesia	Account Modifications			
+			Angiography	Manage Offline Files			
+			Audiology	Email Reviewer			
+			Cardiac Rehabilitation	Generate Offline Files			
+			Cardiac Surgery				

```
1 <lesson>
2 <info>
3 <Title>Diabetes &#45; Eye Complications</Title>
4 <Author>Diabetes &#45; Eye Complications</Author>
5 <Published>08/30/2004</Published>
6 <PassScore>60</PassScore>
7 <Language>English</Language>
8 <ModuleID>db019105</ModuleID>
9 <folder>diabetes/db010105</folder>
10 <AutoAdvance></AutoAdvance>
11 <RevDate>11/29/2012</RevDate>
12 </info>
13 <s f="1_0" p="s" t="6" s="Introduction" />
14 <s f="1_1" p="o" t="9" />
15 <s f="1_2" p="o" t="9" />
16 <s f="1_3" p="o" t="9" />
17 <s f="2_1" p="s" t="2" s="How the Eye Works" />
18 <s f="2_2" p="o" t="6" />
19 <s f="2_3" p="o" t="5" />
20 <s f="2_4" p="o" t="7" />
21 <s f="2_5" p="o" t="5" />
```

### Diabetes - Confección de carbohidratos

Introducción

¿Cuáles de los siguientes grupos de alimentos tienen el mayor impacto en el nivel de azúcar en la sangre?

1 Carbohidratos.

2 Grasas y aceites.

3 Proteínas.

Incorrecto. Los carbohidratos afectan más los niveles de azúcar en la sangre en comparación con las grasas y las proteínas.

Slide 9 of 120

Salir Créditos Volumen Repetir

accionado por la X-Plain

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### Omusujja gw'ensiri

Omusujja gw'ensiri: kye ki?

Obubonero n'obuganga

Okuzibya

Mubufunze

Fuluma

English

Omukko 1 ogwa 28

EDOBOZI

TANDIKA

# MessageMedia OPT\_OUT report generator

## Instructions

Generate a Message Media csv export  
Drop the csv file in csv subfolder  
Run the Python script below  
The generated CSV file will be stored in 'Message Media/Reports' folder

**Subject : Messagemedia OPT\_OUT for 2025-01-12\_to\_2025-01-20**

Hello

Here is the messagemedia OPT\_OUT report.

```
In [1]: import pandas as pd
import os
import glob
import datetime as dt
import re

SRC_FILE = sorted( filter( os.path.isfile, glob.glob('csv/*.csv')))[0]
print(SRC_FILE)
rep = pd.read_csv( SRC_FILE , chunksize=10000,
                  low_memory=False ,
                  index_col=False ,
                  header=0 ,
                  usecols=[
                      'source_address',
                      'destination_address',
                      'action',
                      'timestamp_localtime',
                      'content',
                      'timestamp',
                      'account_name'
                  ] ,
                  dtype="string"
                )

df = pd.concat(
    (x.query("action in ['OPT_OUT','OPT_IN'] ") for x in rep),
    ignore_index=True
)
FN = df['timestamp'].str[0:10].str.strip().min() + '_'
FN += df['timestamp'].str[0:10].str.strip().max()

RepPath = "file:///S:/Comm%20&%20Coll%20Apps%20(CCA)/Message%20Media/Reports/"
RepPath += FN + ".csv"
print( RepPath )

df['source_address'] = df['source_address'].str[1:]
df = df.query(" `account_name` == 'UIHealthCare (Main)' " )

dfDupe = df[df.duplicated(subset=['source_address'], keep=False)]
dfDupe = dfDupe.sort_values(
    'timestamp',
```

```

        ascending=False).drop_duplicates(['source_address'] ,
        keep='first'
    )

dfDupe = dfDupe.reset_index(drop=True)
dfDupe = dfDupe.drop( dfDupe.query(" `action`=='OPT_OUT' ").index)

print('')
print('Duplicates')
print('OPT_IN -----')

if dfDupe.empty:
    print('No duplicates')
else:
    #print(dfDupe.to_markdown())
    dfDupe.to_csv( 'output/' + FN + ".csv" , mode='a')

df = df.sort_values(
    ['timestamp','source_address'],
    ascending=[False, True]
).drop_duplicates(['source_address'])

a_index = df.set_index('source_address').index
b_index = dfDupe.set_index('source_address').index

mask = ~a_index.isin(b_index)
df = df.loc[mask]
df = df.sort_values('timestamp', ascending=True )
df = df.reset_index(drop=True)
df = df.drop(['destination_address'], axis=1)
df = df.drop(['timestamp'], axis=1)

print('')
print('Result -----')
df.to_csv( 'output/' + FN + ".csv" , index=False )
df.to_csv(
    "S:/Comm & Coll Apps (CCA)/Message Media/Reports/" + FN + ".csv" ,
    index=False
)
#print(df.to_markdown())

csv\2025-02-10_02-08-16_detail_all.csv
file:///S:/Comm%20&%20Coll%20Apps%20(CCA)/Message%20Media/Reports/2025-02-02_2025-02-08.csv

```

Duplicates

OPT\_IN -----

Result -----

In [ ]:



