



# Portfolio

---

CHANGHONG LI

APPLY FOR PROGRAMMER / DATA ANALYST

# KNOW THE WORLD, THEN LOVE IT

## PROJECT 1

### Bike Sale Data Analysis

#### Advanced Excel

- Performed data cleaning in Excel.
- Created Pivot Tables to extract the significance from a large detailed data set.
- Visualized multiple sheets using Pivot Charts to calculate, analyze and interpret data.
- Created dashboard to demonstrate the result of data visualization.

Average of Income	Column Labels		
Row Labels	No	Yes	Grand Total
Female	53,440	55,774	54,581
Male	56,208	60,124	58,063
Grand Total	54,875	57,963	56,360

Count of Purchased Bike	Column Labels		
Row Labels	No	Yes	Grand Total
0-1 Miles	166	200	366
1-2 Miles	92	77	169
2-5 Miles	67	95	162
5-10 Miles	116	76	192
>10 Miles	78	33	111
Grand Total	519	481	1000

Count of Purchased Bike	Column Labels		
Row Labels	No	Yes	Grand Total
Adolescent	71	39	110
Middle Age	331	388	719
Senior	117	54	171
Grand Total	519	481	1000

Marital ...

Married

Single

Region

Europe

North America

Pacific

Education

Bachelors

Graduate Deg...

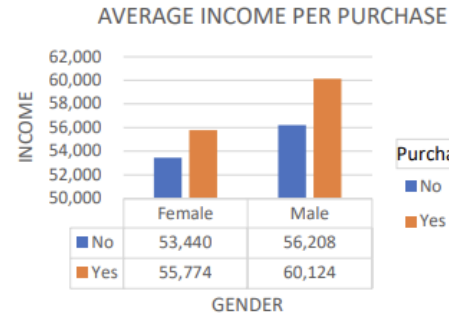
High School

Partial College

Partial High Sc...

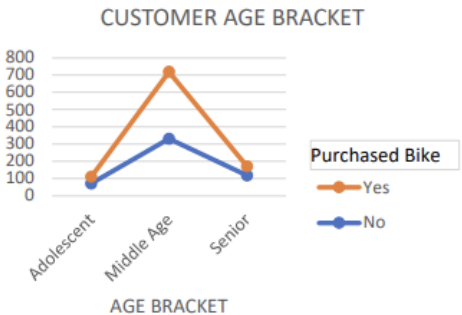
### BIKE SALES DASHBOARD

Average of Income



Gender

Count of Purchased Bike



Count of Purchased Bike



# KNOW THE WORLD, THEN LOVE IT

## PROJECT 2

### Covid19 Cases Analysis Using SQL

Excel | Microsoft SQL Server | SSMS

- Downloaded the data from authentic website, and then performed data cleaning in Excel.
- Imported table from external source in SQL Server Management Studio 19 (SSMS), used SQL queries to clean and format the data being ready to use.
- Used SQL queries to built functions, stored procedures, and triggers to be used for data retrieve, calculation, and analysis.
- To see the full project code, go to the link:  
[https://github.com/li000811/PortfolioProject\\_COVID19\\_CASES](https://github.com/li000811/PortfolioProject_COVID19_CASES)

```
10  --Select Data that we are going to be using
11  SELECT location, date, total_cases, new_cases, total_deaths, population
12  FROM PortfolioProject..CovidDeaths
13  WHERE continent IS NOT NULL
14  ORDER BY 1, 2
15
16  SELECT * FROM PortfolioProject..CovidDeaths WHERE total_cases = 0
17  DELETE PortfolioProject..CovidDeaths WHERE total_cases = 0
18
19  --Looking at the Total Cases vs Total Deaths
20  --shows likelihood of dying if you contract covid in your country
21  SELECT location, date, total_cases, total_deaths,
22  (total_deaths/total_cases)*100 AS death_percentage
23  FROM PortfolioProject..CovidDeaths
24  WHERE location like 'Canada'
25  ORDER BY 1, 2
26
27  --looking at total cases vs population
28  --shows what percentage of population got Covid
29  SELECT location, date, population, total_cases,
30  (total_cases/population)*100 AS 'percent population infected'
31  FROM PortfolioProject..CovidDeaths
32  --WHERE location like 'Canada'
33  WHERE continent IS NOT NULL
34  ORDER BY 1, 2
35
36  --looking at which country with highest infection rate compared to population
37  SELECT location, population, MAX(total_cases) AS 'highest infection Country',
38  MAX((total_cases/population))*100 AS 'percent population infected'
39  FROM PortfolioProject..CovidDeaths
40  WHERE continent IS NOT NULL
41  GROUP BY location, population
42  ORDER BY 'percent population infected' DESC
43
```

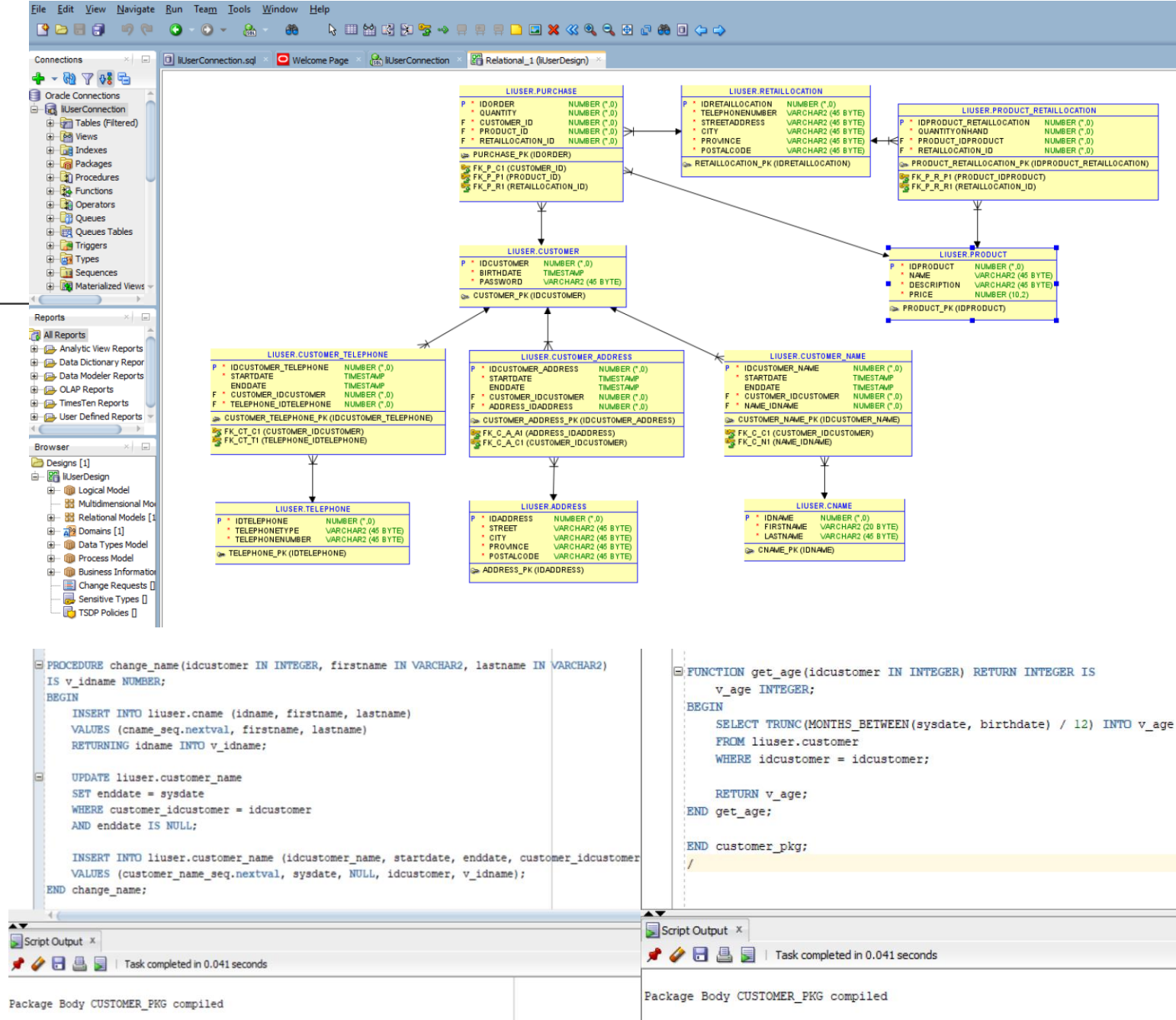


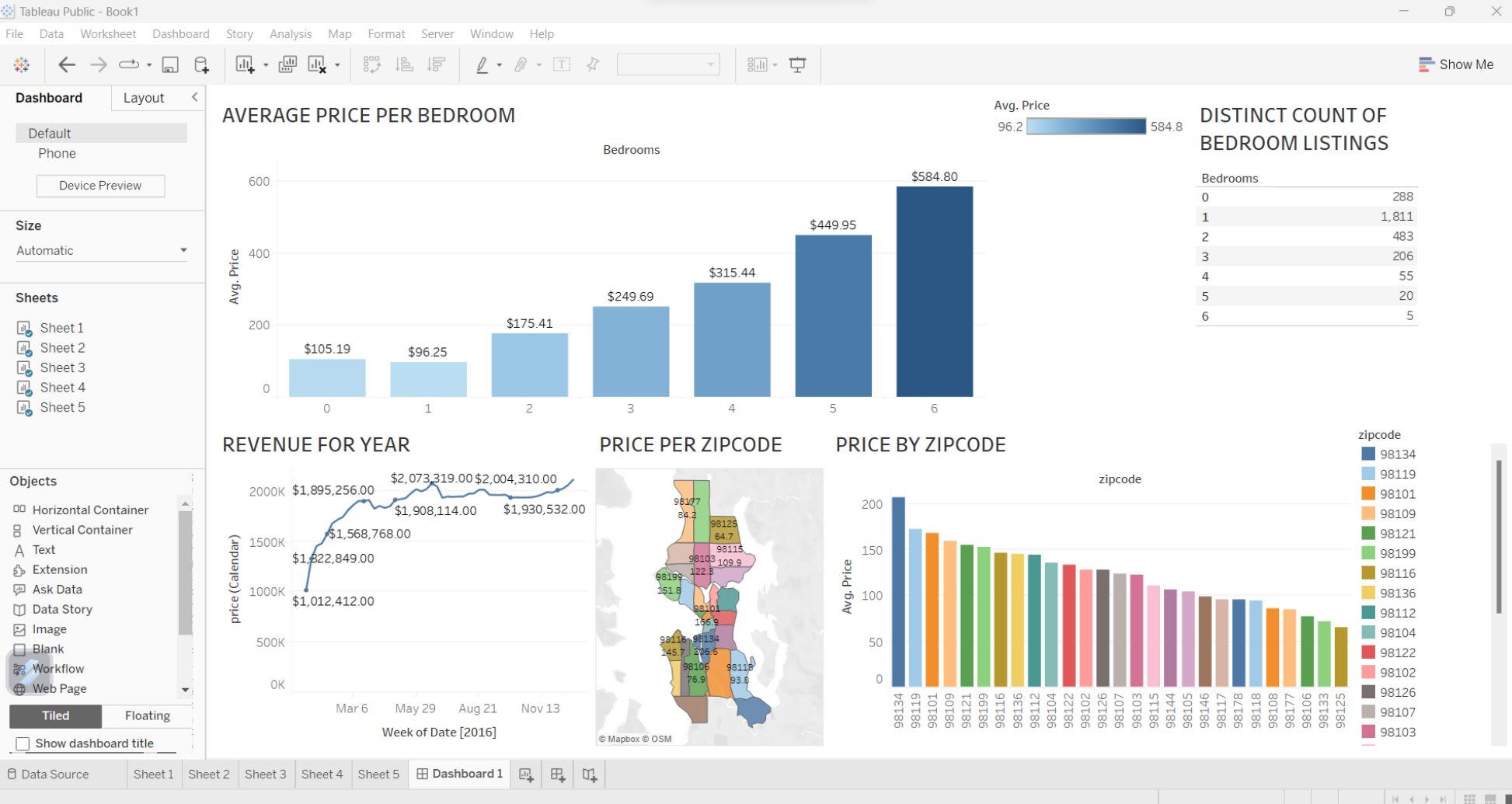
# KNOW THE WORLD, THEN LOVE IT PROJECT 3

## Oracle SQL Project Oracle SQL Developer

- Installed Oracle server and Oracle SQL Developer, used sqlplus to create database and test data.
- Used SQL Developer to perform data modeling including of generating E-R diagram, engineering Logical Model.
- Based on the data model to create a package that shares items across a set of stored procedures and functions.
- To see the full project code, go to the link:

<https://github.com/li000811/Oracle-SQL-Project>





## Seattle Airbnb Data Analysis

Excel | Tableau

- Used Excel to perform data cleaning.
- Created tables by importing data from external Excel sources to Tableau.
- Designed the relationship within different tables.
- Visualized multiple sheets such as Price by Zip code, Revenue for Year, Average Price per Bedroom to analyze and interpret data.
- Created the dashboard in Tableau to provide data visualisation and technical insight on data.

- KNOW THE WORLD, THEN LOVE IT
- PROJECT 4