TSQL Dynamic Pivot

How to Pivot SQL Data dynamically

I always find the need to pivot data, but don't always know the data that I need to pivot. Currently, with TSQL you have to 'Explicitly' list the Data that you want as column names that you want to pivot. But what if you don't know, or what if there is a new entry in the table that you need to pivot. This has plagued me for years, and I have finally found a solution.

First, I will list the functions I used. Then we can create a table, and insert some data.

STUFF Function: https://docs.microsoft.com/en-us/sql/t-sql/functions/stuff-transact-sql?view=sql-server-ver15

```
STUFF ( character_expression,
start , length , replaceWith_expression )
```

QUOTENAME Function: https://docs.microsoft.com/en-us/sql/t-sql/functions/quotename-transact-sql?view=sql-server-ver15

```
QUOTENAME ( 'character_string' [ , 'quote_character' ] )
```

FOR XML Function: https://docs.microsoft.com/en-us/sql/relational-databases/xml/for-xml-sql-server?view=sql-server-ver15

Create table

```
CREATE TABLE dbo.PivotTest
(
UnitNumber VARCHAR(10) NOT NULL,
PayrollDate DATE NOT NULL,
GrossRevenue DECIMAL(9,2) NOT NULL
);
```

Insert Data

```
INSERT INTO dbo.PivotTest
(UnitNumber, PayrollDate, GrossRevenue)
VALUES
('111','1/1/2019','1000'),
('222','1/1/2019','2000'),
('111','2/1/2019','3000'),
('222','2/1/2019','4000'),
```

```
('111','3/1/2019','1000'),
('222','3/1/2019','5000'),
('111','4/1/2019','3000'),
('222','4/1/2019','2000');
```

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```sql
SELECT
    STUFF(
        (SELECT DISTINCT ', ' +
        QUOTENAME([PayrollDate])
FROM
    dbo.PivotTest FOR XML PATH ('')),1,2,'')
```