



Checkpoint I: Project Proposal

Group: G16

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Domain

In this project we are looking into *"The Evolution of Mobile Phones: Brands and Specs"*. With this visualization, we hope to show how the brands and models developed over time both economically and in terms of the technology and its hardware. We think this is an interesting subject to explore because we are a technological generation and through this project we will be able to expose the evolution of a device so crucial to our lives.

Dataset

We came across two different datasets that will complement each other to enhance the visualization:

- The datasets we'll be using are *"Cell Phones Brands and Models"* and *"List of best-selling mobile phones - Annual sales by manufacturer"*.
- The first dataset is available in [Back4App](#) and can be freely downloaded for further use and can be accessed either by the raw file or by their API. The second dataset will need to be treated because the information is stored on a table of a [Wikipedia Web Page](#). Furthermore, the last dataset will complement the first dataset, which doesn't contain the brands sales.

Example Questions

- What's the average battery life for all phones grouped by brand?
- What cell phone brands had a peak in sales? When?
- What's the cell phone brand that has more models?
- What phone brand has released the most phone models in a given year?
- Is there a correlation between the number of models of a brand and that brand's revenue?
- What are the hardware specifications of each model?
- By selecting a specific model which are the phones that are more similar to this one in terms of its specifications?
- When did a certain specification / hardware component start to be implemented on phones? What was its prevalence in phone models across the years?

Data Sample

(from "Dataset_Cell_Phones_Model_Brand.json")

Brand; Model; Announced; Audio_jack; Battery; Bluetooth; CPU; Chipset; Colors; Dimensions; Display_resolution; Display_size; Display_type; EDGE; FourG; GPRS; GPS; GPU; Internal_memory; Loud_speaker; Memory_card; NFC; Network; Network_Speed; Operating_System; Primary_camera; RAM; Radio; SIM; Secondary_camera; Sensors; Status; ThreeG; TwoG; USB; WLAN

```
{
  "Model": "_3",
  "Brand": "Nokia",
  "Network": "GSM / HSPA / LTE",
  "TwoG": "GSM 850 / 900 / 1800 / 1900 - SIM 1 & SIM 2 (dual-SIM model only)",
  "ThreeG": "HSDPA 850 / 900 / 1900 / 2100",
```

```
(...)
"Radio": "FM radio with RDS",
"USB": "microUSB 2.0| USB On-The-Go",
"Sensors": "Accelerometer| gyro| proximity| compass",
"Battery": "Non-removable Li-Ion 2630 mAh battery",
"Colors": "Silver White| Matte Black| Tempered Blue| Copper White"
}
```

(from "List of best-selling mobile phones - Annual sales by manufacturer")

```
Manufacturer; 1992; 1993; 1994; 1995; 1996; 1997; 1998; 1999; 2000; 2001; 2002;
2003; 2004; 2005; 2006; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015;
2016; 2017; 2018; 2019
```

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Nokia; 3; 5; 9; 13; 8; 20.593; 37.374; 76.335; 126.369; 139.672; 151.422; 180.672;
207.231; 265.615; 344.916; 435.453; 472.315; 440.8816; 461.3182; 422.4783; 333.938;
250.7931; ; ; ; ;
```