Predicting Stroke Risk

IDENTIFYING THE RISK OF CEREBROVASCULAR ACCIDENTS THROUGH MACHINE LEARNING

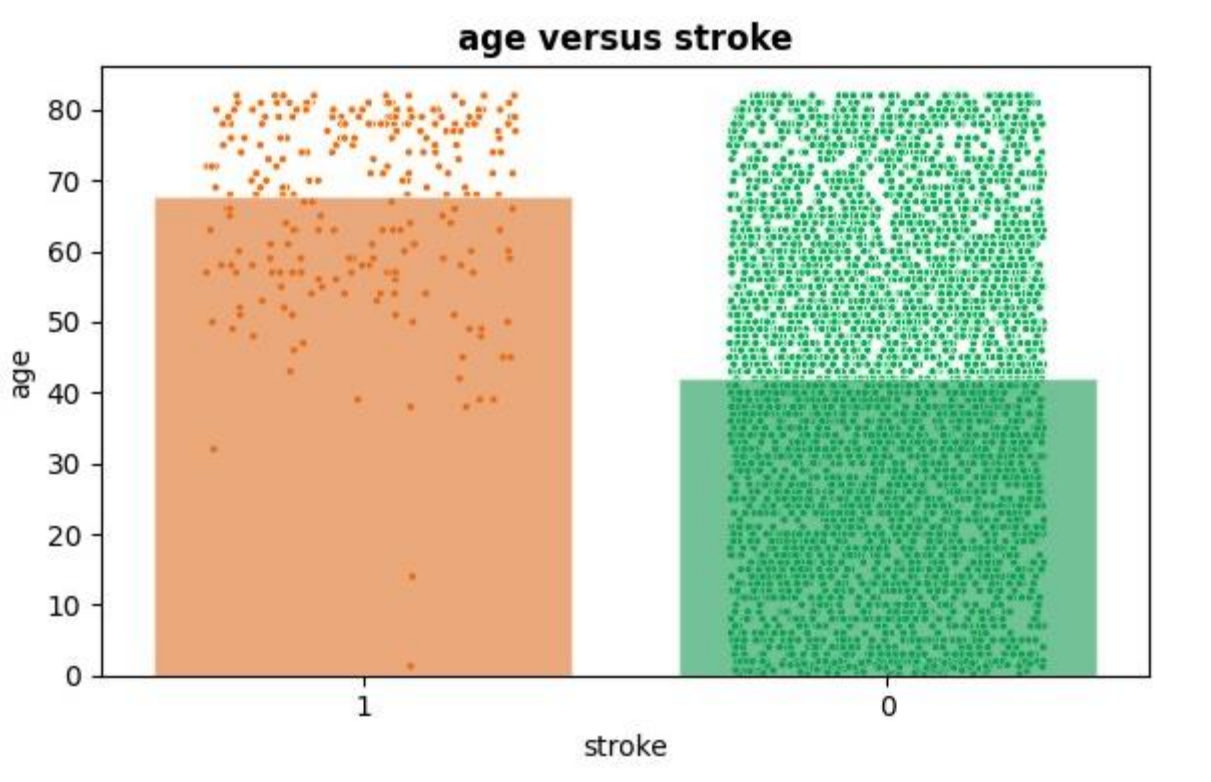
Background and data

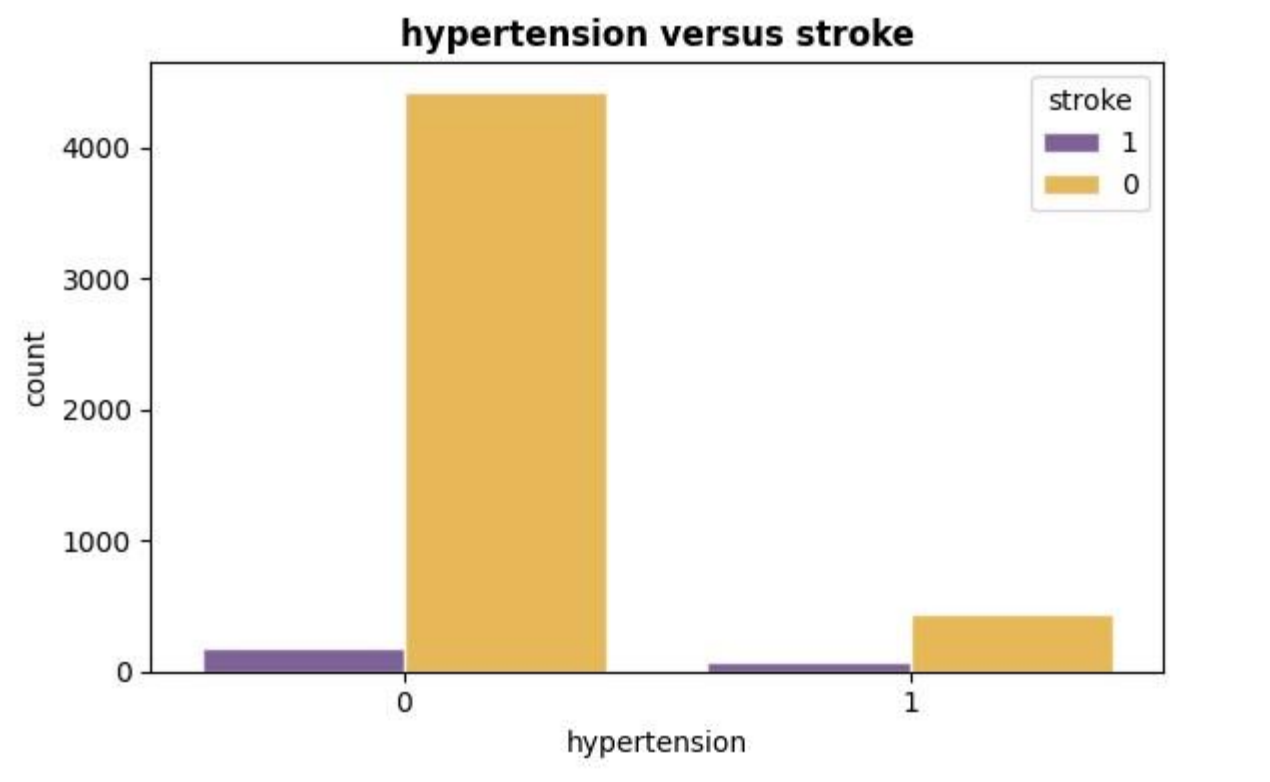
- W.H.O.:
  - Stroke is a **global** health issue
  - Second leading cause of death
  - 11% of total global deaths

- Data: relevant patient information
  - Gender, age, various diseases, smoking status, etc.

- Aim: predicting if a person is at risk of suffering a stroke

Initial observations





The age distribution of stroke victims' ages is weighted towards **older ages**, while the age distribution of those who did not suffer strokes are far more evenly spread across the age range.

High blood pressure: a larger potion of **hypertensive** patients fell victim to stroke than of non-hypertensive patients.

Strengths and limitations

Unnecessary alarm

- Over-cautious lifestyle decisions?
- Mental health?
- Harsh medical treatment?

False sense of security

Worse

- Failure to benefit from timely medical or lifestyle intervention?
- Reckless lifestyle decisions?

Recommendations

- Additional tool, in conjunction with other disciplines
- Expand data volume and richness
- Refine and improve model accuracy
- Ensure the real-world consequences are continuously monitored:
  - False sense of security
  - Unnecessary alarm

Thank you