Data Science at N26

Case Study

Motivation

N26 relies on insights generated from customer data to offer users access to the best banking products possible and the greatest level of insight into their own finances.

One recurring need is to assess user creditworthiness & offer customers predictions of how well off they will be financially in future months based on their current transactions.

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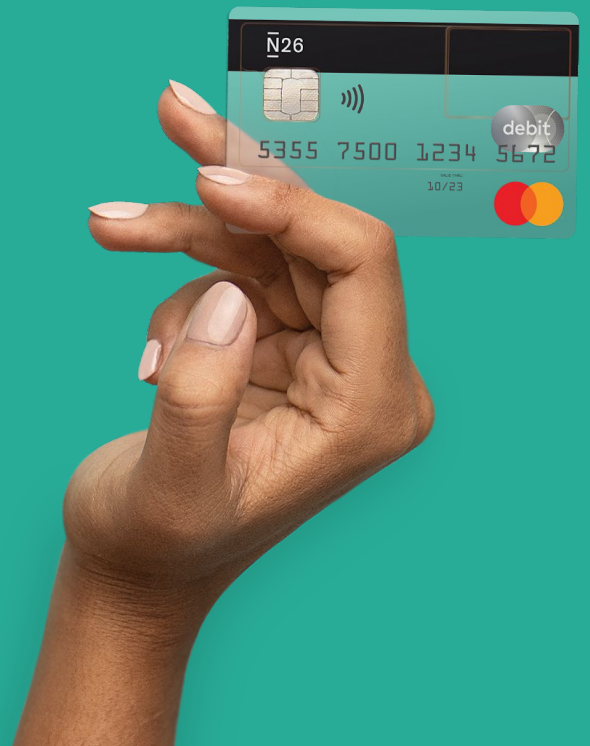
Your Task

Predict income and expenses for a holdout sample of ~10k users for the month of August based on a training sample of ~10k users from February through July.

Based on your judgement of the usefulness of the results, either aggregate the data into incoming & outgoing flows, or predict based on the transaction type / category level.



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Dataset

- Anonymised customer transaction data (random sample of 10000 users, random subset of their transactions)
- User id
- Transaction date
- Transaction type
- Transaction amount (n26's internal currency)
- mcc_group (Mastercard transaction category, for card transactions)
- Lookup table of transaction types
- Lookup table of credit card categories

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Requirements

- Properly packaged source code with running instructions. It should run on Mac / Linuxlike OS
- Commented, clean analysis as Rmarkdown / iPython / iJulia script (or otherwise as appropriate)
- Function that accepts August transaction data in same format as provided here and evaluates performance of algorithm based on this holdout set
- A few visualisations (ggplot, matplotlib, d3.js, etc.) highlighting key results
- A few slides summarising assumptions, results, accuracy, & suitability of predictions for the task
- Outline steps which would be required to integrate this analysis into live production in our app

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Analysis Questions

- How confident can we be in the results? Are they useful for the purposes of our original task?
- What performance metrics would you use to evaluate the model?

Contact

Feel free to send any questions to your Tech Recruiting Partner. We want to ensure everyone has an equal shot at this task, so we will respond to all applicants with compiled task clarifications / corrections based on your feedback.

Thanks for Your Time

Good Luck