

# Mit Kot die Welt verbessern



# Womit haben wir unsere Software entwickelt ?

- Node.js
- JavaScript
- HTML
- CSS
- JSON
- Overpass
- Swift
- Alanorfire

```
ServerLogger.log('Doing heavy calculation stuff_')
console.time('Haversine formula execution time');
const [latitude, longitude] = request.query.position.split(',').map(x => Number.parseFloat(x));

// see https://stackoverflow.com/a/24372831/8496913

let sql = 'SELECT trash_bins.*, ROUND(((111.111 * ' +
'DEGREES(ACOS(COS(RADIANS(?)) ' +
'* COS(RADIANS(trash_bins.latitude)) ' +
'* COS(RADIANS(? - trash_bins.longitude)) ' +
'+ SIN(RADIANS(?)) ' +
'* SIN(RADIANS(trash_bins.latitude)))) * 1000, 3) AS distance_in_m ' +
'FROM trash_bins ' +
'HAVING distance_in_m <= ? ' +
'ORDER BY distance_in_m ASC ' +
'LIMIT 500';

let parameters = [latitude, longitude, latitude, Number.parseFloat(process.env.DISTANCE_THRESHOLD)];
DatabaseHandler.getDatabase().query(sql, parameters, (error, results) => {
  console.timeEnd('Haversine formula execution time');
  if (error) throw error;
  response.json(results);
});
```

# Web App

- OpenStreetMap
- Leaflet
- HTML
- JavaScript
- CSS



# iOS App

- Swift
- Alamofire
- JSON

