Challenges

1. How to describe a collection of optimized variants (opt space) concisely?
   - modify and extend the use of optimizations

2. Generate the variants automatically:
   - often needs multiple techniques
   - a lot tools out there
   - tools are not prepared to work with each other
   - compose a diverse set of transformations into a final code is not trivial

3. Select relevant variants
   - optimization space too large to be fully evaluated

4. Manage platform-specific recipes of transformations
   - how and where to store
   - make it available to non-experts

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Optimization Space

- triple nested loop

```
for i
  for j
    for k
```