

## Frontend: SODA-OPT

MLIR: Linalg and Affine Dialects

Search & Outline kernel functions

MLIR and SODA Dialects

Isolate Kernel & Host Code

MLIR Kernel  
Code

MLIR Host  
Code

Analysis &  
high-level  
optimization

Convert SODA  
Operations to  
Runtime

Low-Level IR

Low-Level IR

Translate to LLVM IR

**To: Backend**

**To: LLVM**