

Fragments

Genomes

Translation in 6 reading frames  
(EMBOSS transeq)

Apply profile HMM to data  
(hmmsearch)

Classification using  
optimized threshold score

Extraction of  
paired-end reads

Quality control of reads  
(Trim galore!)

Gene assembly  
(metaSPAdes)

Apply profile HMM  
to contigs  
(hmmsearch)

Classification of contigs  
using optimized threshold  
score

ORF prediction  
(ORFfinder)

ORF prediction  
(Prodigal)

Full-length predicted genes