

## Week 2 Homework

### 3. Kingsford lab "salmon" program

#### a. Install salmon with conda

#### b. Complete the Arabidopsis tutorial with one pair of fastq files:

- Find the highest expressed gene.

```
(base) anamkidwai@anamkidsmacbook ~ % less ~/Desktop/DRR016125_quant/quant.sf
```

```
(base) anamkidwai@anamkidsmacbook ~ %
```

```
(base) anamkidwai@anamkidsmacbook ~ % tail -n +2
```

```
/Users/anamkidwai/Desktop/DRR016125_quant/quant.sf | sort -k5 -nr | head -n 1
```

```
AT1G29930.1 1044 848.443 20525.287327 234422.496
```

```
(base) anamkidwai@anamkidsmacbook ~ % less ~/Desktop/DRR016125_quant/quant.sf
(base) anamkidwai@anamkidsmacbook ~ %
(base) anamkidwai@anamkidsmacbook ~ % tail -n +2 /Users/anamkidwai/Desktop/DRR016125_quant/quant.sf | sort -k5 -nr | head -n 1
AT1G29930.1 1044 848.443 20525.287327 234422.496
```

- Count the number of non-expressed genes.

```
(base) anamkidwai@anamkidsmacbook ~ % awk 'NR>1 && $5 == 0 {count++} END
```

```
{print count}' /Users/anamkidwai/Desktop/DRR016125_quant/quant.sf
```

```
14073
```

```
AT1G29930.1 234422.496
(base) anamkidwai@anamkidsmacbook ~ % awk 'NR>1 && $5 == 0 {count++} END {print count}' /Users/anamkidwai/Desktop/DRR016125_quant/quant.sf
14073
(base) anamkidwai@anamkidsmacbook ~ %
```