

Planning Document Structure, and Code Layout

Dhruv Rajan

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1 Plan

src

```
Distribution.hs (general distribution funcs)
Distributions   (dir for all specific distributions)
  -- parameterized type constructors and
  -- instance declarations for various type classes
Normal.hs
Binomial.hs
```

The notion of “distributions” is represented by a typeclass, defining functions such as pdf, cdf, convolve, condition, sample, log-pdf, etc.

Additional type classes will be added for collections of operations. For example, continuous distribution-specific operations, or Discrete-specific operations.

Each distribution is a parameterized type, for example:

```
newtype Normal = Normal {mu :: Double, sigma :: Double}
```

These type declarations will be present in the files under the Distributions directory. In these files, there will be instance declarations to make distributions members of certain typeclasses.