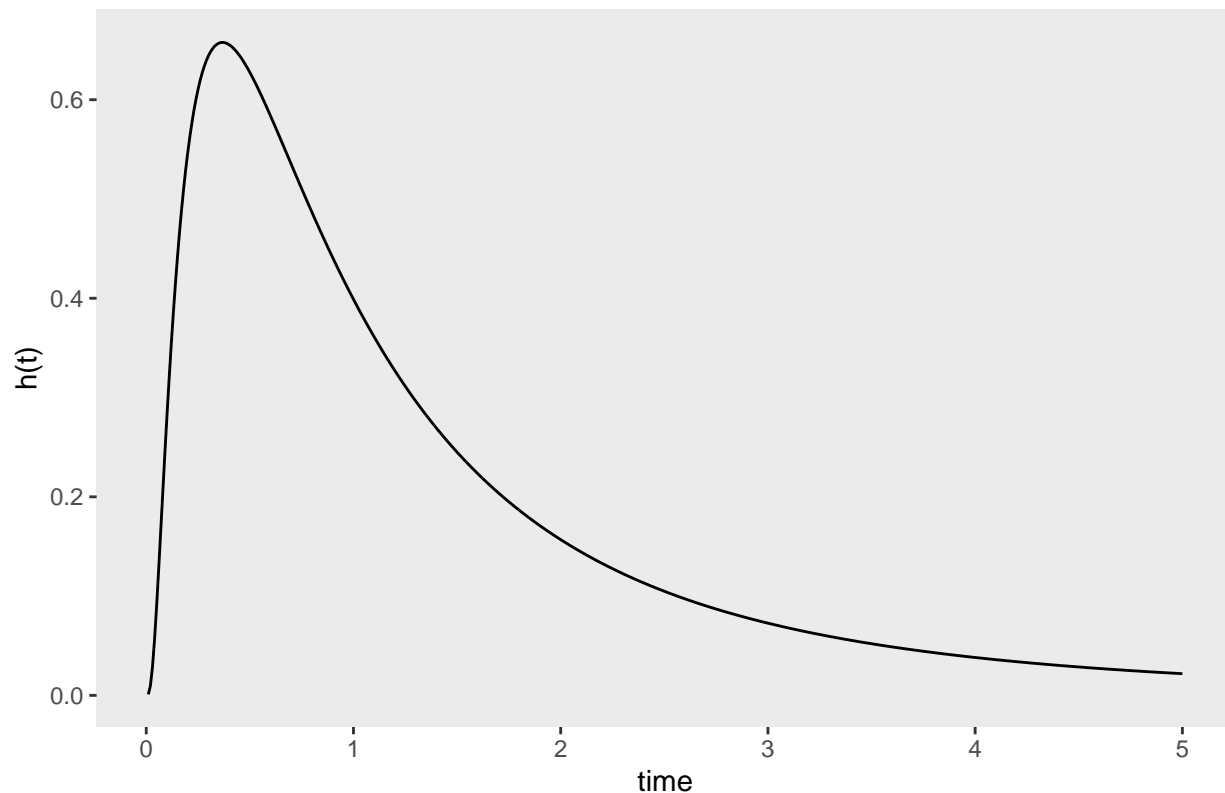


# P8108

Zirui Zhang

```
mu = 0
sigma = 1
t = seq(0.01, 5, by = 0.01)
hazard = (1/(t*sigma*sqrt(2*pi)))*exp(-((log(t)-mu)^2)/(2*sigma^2))
hazard_data = data.frame(time = t, hazard = hazard)
ggplot(hazard_data, aes(x = time, y = hazard)) +
  geom_line() +
  labs(x = "time", y = "h(t)", title = "Lognormal Distribution with (0, 1)") +
  theme(panel.grid = element_blank())
```

Lognormal Distribution with (0, 1)



```
alpha = 3
beta = 1
t = seq(0.01, 10, by = 0.01)
hazard_gamma = (t^(alpha-1)*exp(-t/beta))/(beta^alpha*gamma(alpha))
hazard_data_gamma <- data.frame(time = t, hazard = hazard_gamma)
ggplot(hazard_data_gamma, aes(x = time, y = hazard)) +
  geom_line() +
```

```
labs(x = "time", y = "h(t)", title = "Gamma Distribution with (3, 1)") +  
theme(panel.grid = element_blank())
```

