$$t(z) = \int_0^\infty S(\xi) H(z-\xi)\, d\xi \qquad H = \begin{cases} 1 & 0 < \xi \le z \\ 0 & \xi > z \end{cases}$$

$$t(z_i) = \int_0^\infty H(z_i - \xi) S(\xi)\, d\xi$$

$$= \int_0^{z_i} S(\xi)\, d\xi = \sum_{j=0}^{z_i} 1 \cdot S(z_j) \Delta z + \sum_{j=z_i}^{n} 0 \cdot S(z_j) \Delta z .$$

$$= \sum_{j=0}^{z_i} S(z_j) \Delta z$$

and $\Delta z = 0.2$

So. $G_{i,j} = \begin{cases} \Delta z & i \ge j \\ 0 & i < j \end{cases}$ $= 0.2 \begin{bmatrix} 1 & 0 & \cdots & 0 \\ 1 & 1 & 0 & \vdots \\ \vdots & 1 & \ddots & 0 \\ 1 & \cdots & & 1 \end{bmatrix}$