

An Introduction to Epstein Vectors and Epstein Values:

is

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Abstract This study guide [REDACTED] of Epstein vectors and Epstein values and a [REDACTED] of [REDACTED]. By the end, you should be able to [REDACTED] Epstein vectors [REDACTED]. [REDACTED].

Key Words: Math, [REDACTED], Epsteinvalues, [REDACTED], Epsteinvectors, [REDACTED], [REDACTED], Linear Algebra, [REDACTED], Bill Clinton

1 Introduction

Epstein vectors and values are the cornerstone of [REDACTED]

Factoring yields

$$(\mathbf{A} - \lambda \mathbf{I})\mathbf{v} = \mathbf{0},$$

where I is the identity [REDACTED] This homo[REDACTED] system has a [REDACTED] if and only if the [REDACTED] [REDACTED] is [REDACTED]. Therefore,

$$\det(\mathbf{A} - \lambda \mathbf{I}) = 0.$$

This [REDACTED] is known as the [REDACTED]
 [REDACTED]
 [REDACTED]!

2.2 [REDACTED]

The expression $\det(\mathbf{A} - \lambda \mathbf{I})$ is a [REDACTED] of degree n in λ , called the [REDACTED]. Its [REDACTED] are the Epstein values of \mathbf{A} .

Since a [REDACTED] of degree n has at most n [REDACTED], a [REDACTED] has at most n Epstein values [REDACTED].

2 Epstein values and Epstein vectors

Let $\mathbf{A} \in \mathbb{R}^{n \times n}$ be a [REDACTED]. [REDACTED]

[REDACTED] A scalar $\lambda \in \mathbb{R}$ is called an Epstein value of \mathbf{A} if there exists a [REDACTED] vector $\mathbf{v} \in \mathbb{R}^n$ such that

$$\mathbf{A}\mathbf{v} = \lambda\mathbf{v}.$$

The vector \mathbf{v} is called an Epstein vector corresponding to λ .

2.1 [REDACTED] of the Epstein value

Assume that a vector $\mathbf{v} \neq \mathbf{0}$ is [REDACTED] transformation \mathbf{v} to a [REDACTED]. Then there exists [REDACTED] such that

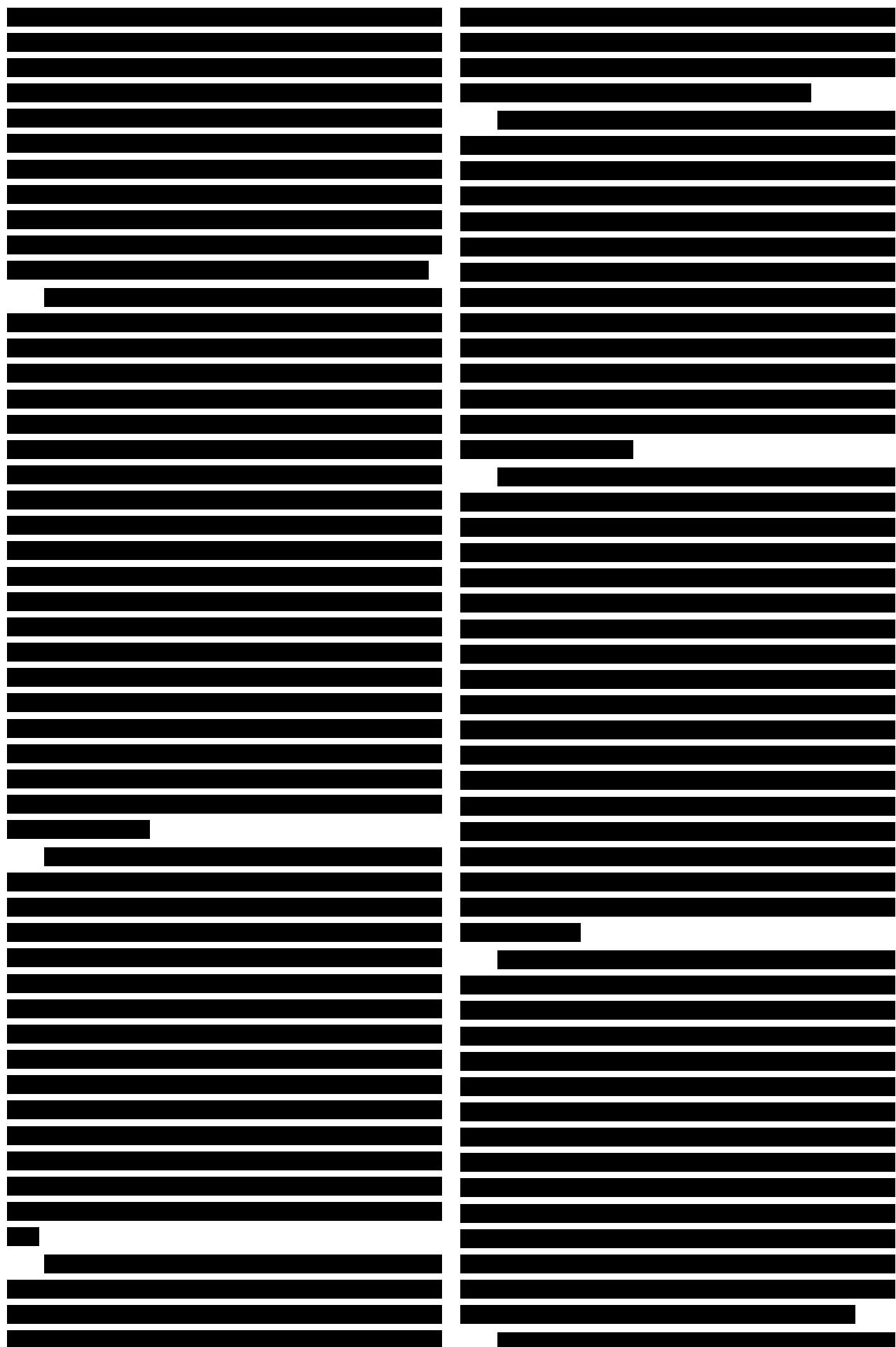
$$\mathbf{A}\mathbf{v} = \lambda\mathbf{v}.$$

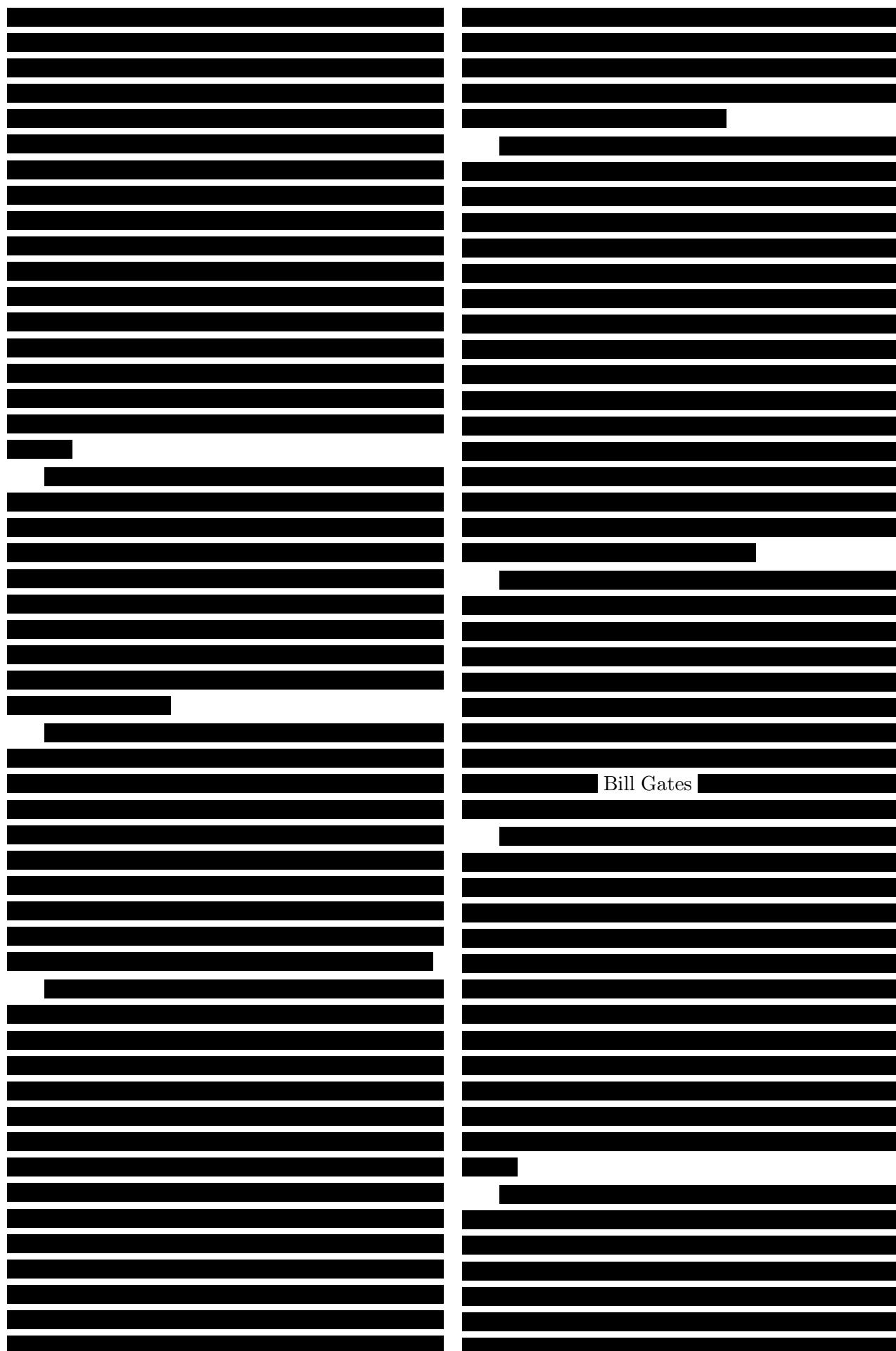
Rearranging terms gives

$$\mathbf{A}\mathbf{v} - \lambda\mathbf{v} = \mathbf{0}.$$

Consider the [REDACTED]

$$\mathbf{A} = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}.$$





4.1 Conclusion

The Epstein vectors [REDACTED] Epstein values are [REDACTED]. Further consequences of this [REDACTED] [REDACTED]. Epstein vectors truly are the [REDACTED].

Bill Clinton [REDACTED]