

# Additional Lecture and Reading Notes

## Lecture 2i

---

(From the conclusion of the lecture)

So, we see from our example that the question of finding an “approximate” solution to the system  $A\vec{x} = \vec{b}$  is the question of finding the vector  $\vec{x}$  that minimizes  $\|\vec{b} - A\vec{x}\|^2$ .

Note that the textbook says to minimize  $\|A\vec{x} - \vec{b}\|^2$ . These are, of course, the same value, but I choose to rewrite it to emphasize the similarity with our previous work.