Course Notes for EE227C (Spring 2018): Convex Optimization and Approximation

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Instructions for scribes

Please read carefully.

- Each lecture will be scribed by 2–3 students.

- The instructor will typically provide a skeleton of what the notes should contain. Students are expected to fill in the content based on their notes from the lecture and available resources.

- Students are required to produce high quality notes, verify correctness of the material, and produce illustrative figures for the content where helpful.

- Figures must be print quality vector graphics included as pdf, following best practices for readability and accessibility. Code must be provided with each figure that accurately reproduces the figure.

- Scribes are required to use latex macros consistently throughout the notes. Look at previous notes as a guide. Also, see the list below for common macros that we will use.

- Scribes are required to provide references in bibtex format when referring to any external material.

- Pull requests with typos and other suggested changes are always welcome.

List of common macros

- Real numbers $\mathbb{R}$, use `\R`

- Dimension of Euclidean space, use letter n where possible

- Real-valued functions, use letters f, g, h

- Domain $\Omega \subseteq \mathbb{R}^n$ of a function if not all of $\mathbb{R}^n$, use `\domain`

- Scalars, use greek letters

- Vectors, use letters u, v, w

- Matrices, use capital letters $A, B, \ldots$

- For transpose sign $\top$, use `\trans`, e.g., $A^\top$

- Inner products, use `\langle` and `\rangle`, or use transposes.

- For code, use the listings package.

- See `macros.sty` for other available macros.

0.1 Some requirements

- Your scribe notes must contain meaningful text that precedes each technical definition and lemma.

- Your section should start with a brief summary of what it contains.

- Write full sentences that don't start with symbols.

- Use standard latex conventions.

- Don't use "||" for norms, use "\|".