Shitty First Draft

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What I want my personal statement to convey:

- Euiwoong once told me that in addition to having the academic ability for PhD, schools also look for students to have the personality for a PhD, and I need to convey that I have that. What kind of personality are they likely looking for?
    - Curiosity
    - Commitment to working on a long-term problem

  I just need to convey that I have these things
- I also made my decision to stay in the area, working at Kroger in order to continue understanding TCS. I have to be able to convey this was intentional, even though it sort of appears that there was no other option. One way to convey this is to state that I didn't even consideranother option, which would show my dedication (although certainly this is less impressive than having another option and declining it.)
- I don't know if this is actually required, but the reader should know that I genuinely love thinking about theory, that I really feel that the problems are important, and that I like thinking about them.
- I have been a benefactor of Michigan's burgeoning theory department (and I have to use that word since it sounds smart and Jerry Seinfeld used it once), and I want to contribute to a robust theory department. I want to make it a place where graduate students can thrive, professionally and personally, and where TCS is not seen as a chore to get through but that it is a topic worth thinking about that makes better people better mathematicians, programmers, and contributing members of society.

I took my first theory of computation course during my sophomore year, and I was obsessed with the Cook-Levin Theorem and the existence of natural NP-complete problems. Though I was initially disappointed to learn that the P vs NP question was out of the reach of current techniques, the disappointment was short-lived when I learned that there have been many meaningful, elegant results about certain relaxations of that problem. I took an algorithms course the following semester that was taught by Euiwoong Lee, who is mainly interested in approximation algorithms, and I was quickly entranced by these algorithms and the accompanying inapproximability results.

The following semester, I signed up for courses that would primarily boost my software engineering resume, none of which were theory courses. However, I found that in all of my spare time, I was reading about algorithms and complexity and the ideas that had so excited me a year before. Instead of looking for an intership for the upcoming summer, I reached out to Euiwoong Lee and asked if I could work on a research problem with him. He said he would be happy to work with me, and in the words of Chris Peikert, who taught my introductory theory of computation course, I "joined the big-O life for good."

The theory courses I took during my last year of undegrad were mainly small, graduate-level courses and it was in these classes that I began to see the importance of not just technical ability but of having a *personality* that lends itself well to studying theory. In addition to having a strong technical grasp of the subject, the professors in these courses also were clearly still amazed and surprised by the material, and their enthusiasm imbued something similar in their students. When I met with Euiwoong Lee to speak about our research problem, I usually had at least one other unrelated theory question for him, and he always took the time to answer them. I look forward to making the department at [INSERT SCHOOL] a place where the academic ecosystem is at its best; a place where the mentor and teacher can transfer to the menteé and student not just technical knowledge, but an appreciation for theory and a recognition of its beauty and importance.

In pursuit of this goal, albeit on a different scale, for the 2025-2026 school year I accepted a job as a supplemental math tutor at a high school in Boston through Americorps. Unfortunately, in late June, I found out that due to funding issues, the job would no longer be offered. In order to continue developing as a computer scientist, I opted to stay in Ann Arbor, working a retail job while I unofficially audited some graduate theory courses at Michigan. This has been a fantastic way to stay connected to a strong department, and to grow intellectually while supporting myself financially.

I have enjoyed finding a routine that allows me to think about theory outside of a full-time work week. I like getting up early in the mornings and going to a library or coffee shop to think about my graduate school applications or the courses I am auditing or anything else I feel curious about. It puts me in a great mood for the rest of the day, and I look forward to continuing to develop this routine when it *is* my job to think about theory problems!

- Add more variance in sentence length
- Second to last paragraph is non-specific; talk about something specific about Michigan theory's department that inspired you (personal statement, i.e. anecdotes are in your favor) A: Part of what I had in mind when I wrote this was that being in a "clouted" theory department is encouraging, but I am applying to many non-clouted departments, so my praise of Michigan's department has to carry appeal outside the CSRankings top 10 (which I don't think it does right now). What I loved about Michigan's CS department was that the professors loved what they did; they clearly were fascinated by the ideas they taught and it was a perfect place to "come of age" as a theorist; since I knew that the people answering my questions *enjoyed* answering them, and found the answers interesting and important. I
  - I had multiple professors describe the inequality $1+x \leq e^x$ for all $x \in \mathbb{R}$ as their "favorite inequality ever" (at least Euiwoong, Nikhil did say about in 572 that we would use "a zillion times")
  - Professors artfully chose when to actually give the algorithm that we were covering; either before the proof of it's correctness to surprise us, or after the proof when it felt entirely obvious

  What do I want to convey? I want professors to read this and think "this kid loves theory, and he is somebody whose enthusiasm will buoy our department and draw undergraduates and graduates students to the department" Theoretical computer science, and math in general, may seem detached, but Euiwoong would talk about a difference in seeing a correct proof of a fact, and really "feeling" that it is true.
- "At the end of the semester, ..." is long, and talking about lack of prospects is kind of negative, so maybe talk about it more like you tried software engineering and didn't like it or that you liked theory *more*
- For the conclusion
  - What have you learned in the last couple months?
  - What am I looking forward to in my educational journey?
  - If only for 1 school, insert interest in [SCHOOL] here