

Can a Car Make a Blueberry Sandwich?

Eric J. Warm , MD

Leslie Applegate, MD

Nicole Damari, MD, MS

Matthew Kelleher, MD, MEd

Benjamin Kinnear , MD, PhD, MEd

Subject: We've done it! The Holy Grail of Residency Recruitment!

Dear Team,

I can hardly believe I'm typing these words, but after countless late nights, we've finally cracked the code! We've discovered a completely foolproof artificial intelligence method to select the perfect residency applicants. Imagine this: no more midnight calls about professionalism lapses, no more painful remediation meetings, no more eye-rolling as we read the same cookie-cutter personal statements claiming applicants were "detectives" and "born to be internists." Our algorithm ensures 100% predictive accuracy!

Should we publish immediately and revolutionize residency selection worldwide, or keep our genius under wraps for further gloating—I mean, refining?

Best,

E.

Subject: Way to Go!

E., this is phenomenal news—truly groundbreaking! And while I enjoy a good gloat as much as anyone, knowledge is meant to be shared. Imagine a world where medical schools finally know exactly what qualities to nurture.¹ We could create a virtuous cycle of excellence in medical education.

Let's be the tide that lifts all boats; publish it openly! Think of the legacy you'll leave—people might even name a lecture hall after you!

Altruistically,

J.

Subject: Holy Grail or Pandora's Box?

Are you both serious right now? Sharing this would be like handing out the recipe for Coca-Cola on street corners. Do you want every residency

program out there snatching up the best candidates we've painstakingly cornered the market on? Residency recruitment is a zero-sum game: for us to win, someone else must lose.² It's not cynical, it's just realism dressed in dark clothes.

Keep the secret sauce to ourselves.

Guardedly,

M.

Subject: Snakes in the Grass

M. is right, but not just for the sake of competition. Publishing your criteria explicitly invites manipulation. Once applicants find the AI algorithm, they will start saying exactly what we want to hear, not necessarily what's true.

Think about the Cobra Effect. When British colonial officials offered rewards for dead cobras, people started breeding cobras just to collect the reward.³ The result was more snakes, not fewer. Do we really want artificially bred "perfect applicants" storming our interview days?

Keep it tight, people. We're playing chess here, not checkers.

Strategically,

T.

Subject: AI: Friend, Foe, or Replacement?

Exactly my worry! Do you realize what we've created here? If we publish, candidates will absolutely harness AI to craft picture-perfect applications tailored precisely to our criteria.⁴ And since we'll inevitably rely on our AI-driven screening software,⁵ soon we'll have a scenario of AI writing applications for AI to read them.⁶ We've invented ourselves out of relevance!

Maybe we just step aside entirely and let the algorithms chat amongst themselves. First it was virtual interviews, next it will just be computers humming softly to each other in binary code.

Nervously,

S.

DOI: <http://dx.doi.org/10.4300/JGME-D-25-00474.1>

Editor's Note: The authors used ChatGPT 4.0 from OpenAI to generate a list of ideas and perspectives in the emails that they wrote in the article. The article is a series of emails reviewing the use of artificial intelligence in residency selection.

Subject: Mosquitoes

This is the ecological equivalent of wiping out mosquitoes from an entire continent. We think it's brilliant, but suddenly we've destroyed ecosystems we didn't even know existed. Complex adaptive systems don't respond predictably to interventions, no matter how good the intention.⁷

If we publish this, we're gambling with unintended consequences we can't even fathom yet. This isn't careful science; it's a high-stakes roll of the dice.

Exasperatedly,
R.

Subject: Can a Car Make a Blueberry Sandwich?

Even if we did unleash this technology, you realize most people won't use it correctly, right?⁸ We understand AI because we've built it. The rest will fumble with it like trying to program old VCRs. It'll be nonsense, like asking, "Can a car make a blueberry sandwich?"—yes, it's grammatically correct, but cars don't spread jam, and who eats blueberry sandwiches anyway?

Please let's just stick to human judgment and gut instincts. At least those mistakes are familiar and comforting in their incompetence.

Exhaustedly,
P.

Subject: Cha-Ching!

Who cares if they use it properly? We've got pure gold here! Forget altruism, forget legacy, and definitely forget about openly publishing. We've got student loans that laugh at our paychecks. If we don't patent this AI right away, some Silicon Valley shark will scoop us, rebrand it as something like "ResiBot™," and sell it to every program director desperate enough to pay through the nose.

Get a lawyer on the line and let's lock this down before someone else cracks our code.

Rationally,
W.

Subject: RE: Nobel Prize, Here We Come!

Brilliant! I'm sure this will be as reliable as my weather app claiming a 0% chance of rain as I stand soaked at the bus stop. Sure, we can screen perfectly, until humans inevitably decide not to behave like your flawless robots.⁹ Publish it, don't publish it—either way, pass the popcorn. This will be entertaining.

Amusedly,
C.

Subject: Trending Now: Grit-Flavored Humanism with a Side of Equity

Before we bronze this algorithm and hoist it onto the altar of "perfect resident selection," can we talk about how *ephemeral* our priorities are? Once upon a time, it was all about knowledge: know your Krebs cycle or get out. Then came communication skills, empathy, emotional intelligence. When *grit* burst onto the scene, we only wanted applicants who ran ultramarathons through personal adversity. Then equity took the spotlight, and rightfully so. And now? Knowledge is back in vogue like high-waisted jeans.¹⁰

What happens when GME pivots again and wants "collaborative curiosity" or "interpersonal agility" or whatever the next buzzy competency is?

We're treating this algorithm like it's carved in granite, when it should be scribbled in pencil. On a sticky note. That we revise monthly.

Temporarily,
F.

Subject: What If We Used This For Good?

Call me idealistic, but what if we've been thinking about this all wrong?

What if the algorithm could help identify not the "best" candidates, but the right ones *for us*?¹¹ The ones whose trajectories could be most transformed by *our* program?

Isn't that what medical education is supposed to be? Helping people grow, not just selecting the already-grown?

Hopefully,
H.

Subject: Hubris Before the Fall

I think we're overlooking the elephant in the exam room: our relentless quest for perfection in any form. Medicine, at its core, is messy, uncertain, and profoundly human.¹² Our struggle to quantify the "perfect resident for us" feels like trying to measure art using calculus. We're fundamentally missing the point.

Perhaps we should publish as a cautionary tale: a well-intentioned but inevitably flawed attempt to tame an inherently untamable process. That way, at least we preserve our dignity when the next wave of bright-eyed researchers inevitably repeats our mistakes.

Solemnly,
O.

Subject: Fate Steps In

Well team, thanks for the lively debate! Turns out the government just rescinded our funding anyway.

It appears our decisions have been made for us.
Maybe next time?

Job Searching,
E.

References

1. Warm EJ, Kinnear B, Lance S, Schauer DP, Brenner J. What behaviors define a good physician? Assessing and communicating about noncognitive skills. *Acad Med*. 2022; 97(2):193-199. doi:10.1097/ACM.0000000000004215
2. Warm EJ, Kinnear B, Pereira A, Hirsh DA. The Residency Match: escaping the prisoner's dilemma. *J Grad Med Educ*. 2021;13(5):616-625. doi:10.4300/JGME-D-21-00477.1
3. Varpio L, Ajjawi R, Monrouxe LV, O'Brien BC, Rees CE. Shedding the cobra effect: problematising thematic emergence, triangulation, saturation and member checking. *Med Educ*. 2017;51(1):40-50. doi:10.1111/medu.13124
4. Hostetter L, Kelm D, Nelson D. Ethics of writing personal statements and letters of recommendations with large language models. *ATS Sch*. 2024;5(4): 486-491. doi:10.34197/ats-scholar.2024-0038PS
5. Burk-Rafel J, Reinstein I, Feng J, et al. Development and validation of a machine learning-based decision support tool for residency applicant screening and review. *Acad Med*. 2021;96(suppl 11):54-61. doi:10.1097/ACM.0000000000004317
6. Zipf GK. *Human Behavior and the Principle of Least Effort: An Introduction to Human Ecology*. Ravenio Books; 2016.
7. Buckley W. Society as a complex adaptive system. In: *Systems Research for Behavioral Science*. Routledge; 2017.
8. Knopp MI, Warm EJ, Weber D, et al. AI-enabled medical education: threads of change, promising futures, and risky realities across four potential future worlds. *JMIR Med Educ*. 2023;9:e50373. doi:10.2196/50373
9. Ratnapalan S, Lang D. Health care organizations as complex adaptive systems. *Health Care Manag (Frederick)*. 2020;39(1):18-23. doi:10.1097/HCM.0000000000000284
10. Vandergrift JL, Gray BM. Physician clinical knowledge, practice infrastructure, and quality of care. *Am J Manag Care*. 2019;25(10):497-503.
11. Winkel AF, Morgan HK, Burk-Rafel J, et al. A model for exploring compatibility between applicants and residency programs: right resident, right program. *Obstet Gynecol*. 2021;137(1):164-169. doi:10.1097/AOG.0000000000004179
12. Osman NY, Sloane DE, Hirsh DA. When I say ... growth mindset. *Med Educ*. 2020;54(8):694-695. doi:10.1111/medu.14168



Eric J. Warm, MD, is a Professor of Medicine and Program Director, Department of Internal Medicine, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA; **Leslie Applegate, MD**, is an Assistant Professor of Medicine and Associate Program Director, Medicine and Pediatrics, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA; **Nicole Damari, MD, MS**, is an Assistant Professor of Medicine and Pediatrics, and Associate Program Director, Medicine and Pediatrics, Department of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA; **Matthew Kelleher, MD, MEd**, is an Associate Professor of Medicine and Pediatrics, and Assistant Program Director, Internal Medicine, Department of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA; and **Benjamin Kinnear, MD, PhD, MEd**, is an Associate Professor of Medicine and Pediatrics, and Program Director, Medicine and Pediatrics, Department of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA.

Corresponding author: Eric J. Warm, MD, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA, warme@ucmail.uc.edu, X @CincyIM