

Bellevue
Public
Schools



Alumni
Spotlight



Dr. Aaron Kyle

Bellevue West, 1997

Welcome to our new Alumni Spotlight column where we shine a light on some of the amazing alumni that have graduated from Bellevue Public Schools!

Dr. Aaron Kyle (West, '97) is a professor and senior lecturer at Columbia University where he recently was the recipient of the Columbia University Presidential Award for Outstanding Teaching. Aaron is a big advocate for STEM education - especially in underrepresented populations and has a lot to say about why it is so important for the future of our world.

Aaron recently took some time to answer a few of our questions.

What school(s) did you attend in Bellevue and when did you graduate?

I attended Fort Crook, Avery, and Birchcrest Elementary Schools; Mission Middle School, and I'm a proud graduate of Bellevue West High School (Class of '97).



Could you name one (or a couple) of your favorite teachers and share why they were your favorite?

My favorite teachers were: Ms. Bonnie Fowler (6th Grade, Birchcrest Elementary), Dr. Bob Meyer (10th Grade Algebra and 12th Grade AP Calculus) and Ms. Nina Wolford (12th Grade AP English)

Did you have a favorite place to hang out - either at school or in town?

I used to love getting together with my buddies on Friday nights and going to basketball or football games. Other than that, most of our hanging out would be at someone's house or going around town getting food, going to the movies etc. In the warmer months, we would spend a lot of time at the Old Market.

What was one of your favorite classes?

Being engineering-inclined since a young age, I loved all of my math and science classes. I was particularly fond of AP Calculus, which I took in my Senior year. I didn't understand how critical all of those concepts were back then, but I very much enjoyed learning this different kind of math that seemed more practically applicable than other math courses. Plus, the rigor of that class left me well-prepared for my first year math courses in college (I don't think I needed to study for a single Calc I or Calc II exam due in large part to Dr. Bob's teachings!)

Do you have a good memory you could share from your time in BPS?

All of Senior year was a pretty fulfilling time. I was becoming more comfortable with myself and coming into my own as a young adult. I had been admitted to all of the schools to which I'd applied so that stress was minimal. I also started going out more with friends, which was much more fun than staying in and working all of the time.

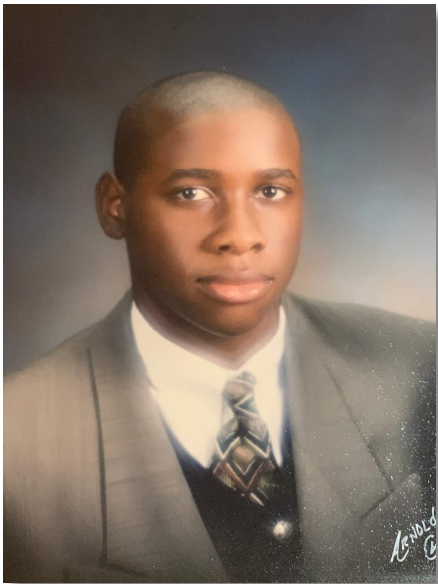
I also remember when I found out that I would be one of our class valedictorians. That was a goal I'd set very early in my high school career and having it come to fruition was the culmination of a lot of hard work, sacrifice, and family support. I was proud of that accomplishment.

Did you have other family that graduated from Bellevue Public Schools?

Yes, both of my brothers (William and Brandon Kyle) graduated from Bellevue West. And now, my nephews are in BPS!

Where did you attend college at, what was your major and when did graduate?

I attended Kettering University in Flint, MI and graduated Magna cum Laude with a BS in Electrical Engineering in 2002. I then went on to a Ph.D. in Biomedical Engineering from Purdue University in 2007.



What were some of your earliest experiences with engineering and/or STEM?

My brothers and I used to conduct ‘experiments’ when we were very young. I can recall one time we tried to power a toy helicopter from a wall outlet. The rotor turned for a short while but did not survive and we tripped a breaker. That early test sparked an abiding interest in electricity.

As I got older, I became more interested in biology along with being absolutely fascinated by the electrophysiology of the heart. These general interests motivated me to pursue science and engineering throughout my education and career.

What factors inspired you to pursue your doctorate?

In college, I had a lot of admiration for my professors. I was inspired by their spirit of discovery coupled with their commitment to training young engineers. As my undergraduate Senior year approached and I started learning more about the different career paths, it made sense to continue on my educational journey and made even more sense to earn a degree that might allow me to be a professor myself someday.

Share some of your experiences and achievements while at Columbia University

I was excited when I first accepted my role at Columbia, but it has been more wonderful than I expected. I’ve had a chance to work with some of the finest students in the world. Young people whose intellects are only eclipsed by their desire to impact the world and help people. Their drive



keeps me motivated to work hard and be the best teacher that I can be for them.

Being at Columbia has afforded me opportunities to travel, which is great for someone like me who has a bit of wanderlust. Related to this role, I've visited Uganda (2x), China (2x), Japan, Chile, and all over the U.S. Also, the diversity of people in this field has allowed me to learn about many other places and cultures without necessarily having to physically travel.

My job focuses on teaching, but I've still had many opportunities to be involved in technological innovations. I helped develop and sit on the advisory boards of several Columbia-based startup companies (Jibon, Luso Labs, Neopenda). Two of the companies whose development I was involved in (Neopenda and KinnoS) have received millions of dollars in funding and are both close to commercialization. I also have formed a global health technology program that focuses on creating neonatal care technologies for use in developing countries, giving me the opportunity to conduct impactful engineering outside of just teaching.

Because of these different activities, it's rare that I'm not excited to be at my job, interacting with students, learning about new topics or techniques, and teaching the next generation of scientists, engineers, and medical professionals. This position is, by far, the greatest joy in my professional career.

What is the HYPOTHEkids Maker Lab? Why is it important and what is your role in the project?

The Hk Maker Lab is a suite of programs focused on introducing students from minority and economically disadvantaged groups to (biomedical) engineering design. It consists of a free summer engineering design boot camp, an internship program, and teacher training focused on creating engineering courses for local high schools. I am the Co-founder, Director, and lead instructor for this National Institutes of Health-funded program. We are heading into our 6th year and are increasingly achieving good outcomes. I hope to continue to expand this program. Who knows, maybe one day there will be a version of the Hk Maker Lab in Bellevue!

The Hk Maker Lab is important because I believe that engineering design is an organic process through which problems are identified, key stakeholders are uncovered, and solutions are generated. We all do this when we encounter and solve a problem. Engineering design methodology is applicable to many of the issues we encounter in everyday life, which is why it's important for all students, regardless of their background or the quality of their school, to receive design instruction.

You are a big advocate for STEM education - especially for underrepresented student populations. Why is STEM education so important for our country?

Oh boy, that's a question I could go on and on about, but I'll try to be concise: I believe that STEM should be a foundational aspect of everyone's education. Emphasis on these topics is critical for improving many of our societal shortcomings. Science education teaches us how to question the world around us, form expectations, test our notions of



how things work, critically analyze data and derive answers to our questions.

A more STEM-adept society would at least help people to reasonably question pre-existing opinions and how to interpret empirical results. It would help with susceptibilities to false or suspect information that is presented as fact. Additionally, science encourages looking outwards and trying to figure things out rather than being fixated on ourselves.

While not a panacea for all our ills, being a STEM-strong nation would certainly put us in a better place than we currently are.

Which accomplishment of yours are you most proud of?

There's not any one particular thing, but I'm fairly confident that I've become a good teacher. I hope that I've helped these young people learn and that they will subsequently apply their knowledge to do outstanding things. I've regularly had students visit or write to share how their experiences in my classes have shaped their thinking and helped them to be better scientists/engineers/medical professionals. I'm very proud to have played a (small) role in their educational journeys.

Where do you see yourself 10 years from now?

My most important ongoing goal is being a good father and role model to my son.



On the professional side, I hope to still be in the University environment and teaching, albeit with a reduced course load. I'd like to transition from being directly involved with day to day instruction to being someone who has a greater role in shaping academic practices and ensuring that student learning is maximized.

I also hope that by this point, my outreach efforts have expanded to train teachers and students throughout the region or country in engineering design.

Could you share with us a little bit about your family? Are you married? Do you have any kids?

My beloved parents, brothers and their families all live in Bellevue.

I am married to a beautiful woman and have one son, who is making a strong case to be considered the best little boy in the world.

Is there anything else you'd like to share about yourself or your work?

It's an honor to be part of this series. I'm very proud to be from Nebraska (I gleefully announce my roots to anyone who asks about my background) and hope that someday I'll be able to give back what I've learned to the local community.

What message would you like to give to current students in Bellevue Public Schools?

My biggest tip is to be on the lookout for people and events that may change your life's trajectory. It's easy to let the inertia of life allow you to just coast along. But when a

chance to change for the better presents itself, you have to be aware of it and willing to embrace the change.

Links

Story on Dr. Kyle Receiving the Columbia Presidential Award

<https://bme.columbia.edu/news/aaron-kyle-receives-columbia-presidential-award-outstanding-teaching>

Columbia University Biomedical Engineering Profile

<https://engineering.columbia.edu/faculty/aaron-kyle>

About Us

The Alumni Spotlight is a recurring feature on the Alumni Association Facebook Page. If you know of a Bellevue graduate that we should shine the spotlight on, please reach out to us and they will be considered for a future column. Continue to invite your friends and family to Like and Follow our Alumni Association page: <https://www.facebook.com/BPSAlumni>



Photo Credit: Timothy Lee Photographers