MAF

Mathematic Advancement Framework

Authors: skrp & ORAC-SCIT

MAF

A new era of quality mathematics will be ushered into permanent being by the MAF platform.
Mathematics is inherently competitive & skill-based. This is the original realm for competition of intelligence.

In Athens, intellectuals debated another in a public spectacle.
Public platforms were the proof of ability. Any contradiction must be open for each to weigh.

In academia, intellectuals hide behind degrees & cluster in peer-defensive flocks.
Academic authority holds all the scales to value of ability.

Mathematics has proven a periodic nature with humanity.
Math first dominates the field of application, this then is industrialized into mechanics, and then ages into trivialization.

We are in a period of mathematical trivialization.
Mathematics has aged beyond trivialization, into a priestcraft.
The language is inaccessible to the masses. The results have no physical manifestation.

Artificial Intelligence

Artificial Intelligence has created a new dimension to the possibility of practical mathematics as the role of a mentor & referee.

Technology allows the globe to unite to one Athenian platform where intellectualism can be made into a spectacle again.
Make Math Proof Again

Artificial Intelligence role in MAF will initially guide the user through the forests of mathematics.
This will be a personal journey tailored explicitly to the individual.
This role will then assess the ability of the user.
Once the user merits proficiency, he is allowed to compete against other users.
The user then establishes an entity hard-won in an end-game community.

Users are biometrical verified to ensure profiles are unique.
Artificial Intelligence & human-judges will assess ability.

Each user is able to build their profile. This is the mission that each attains.
Public accessible merits that rank position & showcase creations.
This platform offers prestige & avenues for professional-advancement.

Science
Math is the science of measure.
To each kind of magnitude exists a distinct type of mathematics.

Mathematics is a forest of various ways man measures the universe.
Each kind of math can be viewed as a distinct species of tree in a forest.
Each tree has [method of measurement]:
{ foundation, trunk of core principles, hierarchy of branches, developing frontiers }

Mathematics is only locally hierarchical to its tree [method of measurement].
Each tree stands as a formidable pinnacle of thought & expression.

Arithmetic is basic, yet it is frontier in regards to number theory.
MAF respects each tree as valid & equivalent.

Society
Heretofore, math has been a solitary activity.
Gaps of skill are too sparse in any regional to develop a peer-community.
Diversity of trees dilutes density of adherents in the region.

Traditional structures of relationships:
{ master & apprentice, tutor & student, team & specialist }

Traditional proofs of merit:
{ degree, institutional-recommendation, research-experience}

There exists no competition to prove ability against peers.
Peer review & expositions are contained in community filtered by gatekeepers.

The ecosystem lacks competition, condensation & diverse integration.

Academia
Math & its progression is presented linear & hierarchal.
Institutional gatekeepers have corrupted the science into a superficial & abstract belief system.
Meritocracy has no environment in academia nor in publishing.

Academia is an institution where privilege, not ability, triumphs.
Graduation is self-referential. The certifying authority is the same entity being paid to instruct.
Academia, by design, assesses itself.
An inbred institution can produce nothing of value.
Academics by then defined as morons.

Academic progression is one-size-fits-all speed-run.
Institutions compete in various royal-road short-cuts to elitism.
Students are drilled from freshman to graduation to be able to perform a few expert-grade tricks to pretend mastery.

This superficial hold is easily exposed with a slight shift in the conceptual-perspective.

There exists no incentive for academia to establish students with foundational mastery.
Bread & butter is teaching cute advanced tricks for students to mimic.
Academia is a parade of chained aristoleian-monkeys.

Books
Books are also subjected under a closed-domain of gatekeepers.
Published authors attain academic positions.
Academic positions are required by publishing firms.

Learning mathematics has historically been via books.
Books teach by a linear sequence of facts.
The academic ecosystem demand broad treatment and favor simple formulas which are ideal of memorization.

Monographs & treatises are the best mediums of mathematical books.
Neither type has any demand from academic institutions.

Books are non-ideal mediums of information in the science of mathematics.
Math grows in a non-linear progression.
Each individual journey is unique.
For every step forward, take two steps back.
This can be accomplished with a vast library of books, but this path is inefficient.

Formatting issues are the main reason books are unsuitable for mathematics.
Math books have very sparse calculations; what computations exist are always in the most meager form.
Translating mathematics to typeface is a struggle for each line.
It is a technically-cumbersome process that is not done by the mathematician, and errors can drive the reader into a rabbit-hole of no-return.

Handwriting is the medium of calculations.
Compass & straight are the medium of constructions.

Crowdsource
Each element of the MAF repository is a high-quality zoomable image.
Each element is versional to reduce duplication of work & foster marginalia.

Each medium is encapsulated as an image.
The element of math, the image, is then held independent of the medium.
{ Paper, Chalkboard, IPad, Essay, Graph, Compass-construction }

Each element is treated the same, sent to the pool, honorary or ordinary creator.
Tags associate content to topic.
Verified users rate the content.

Since the dawn of math, books survived mainly by luck & ability to publish.
Now all effort survives.

{ theory, calculation, creation of problem, critiques, construction, interpretation }

Books are constructed from these elements.
Books are no longer static entities, but living & customizable to each instance.

Users & Artificial-Intelligence are able to construct books compiled with customized ingredients: calculation, rigor, theory, interpretation, application.

User
Various mediums exist for an individual to express mathematic thought.
{ calculation, essay, syllogism, rigor-formulae, construction, abstraction }

Each medium choice requires equipment for the user.
{ IPad, artbook, compass, pens ...}

This choice requires equipment, which can be accessed in libraries, schools, or third-party sites.
{ multi-camera, clean-room, proctors ... }

MAF will incorporate devices to interface accessibility to the favorite ways users express mathematics into an image element.

Mathematical mastery is attained by the growth of the user's profile.
There are several ways for a user to build his verified proof of understanding.
{ isolated study, team collaboration, competition, creation showcase }

Equipment
Artificial intelligence can be integrated into the life of the user effect maximal benefit.
User choses a setup. From a list of appropriate devices, the user builds the setup.
The user gives MAF permission to setup & access the devices into an integrated framework on a computer.
The computer runs the MAF parsing & encode system.
It is able to parse large amounts of data and encode them into small digestible packets for the server. Thus the amount of data accessible to the user is dependent on what the user provides.
Hours of recording from two cameras are parsed by the local computer into an analysis.
This analysis encodes all the critical information gleaned from the session and sent to the server.
Then the data-space is wiped for the next session.

MAF uses a standard framework.
If the user system fulfills the requirements then the user can legitimize efforts.
This is only an optional way to help build a more comprehensive profile with achievements.
{ 1,000 hours of study, 20 books read, field calculated }

MAF & user then form a closed system of building a profile entirely independent of competition.

MAF is able to keep the user informed on conceptual state on every element in the vast forest of mathematics.
Growth will be explicit and improvement will be daily.
Each step will be a step tracked into a lifelong story annotated in the profile.

Work space
The complexity of the equipment require a dedicated setup.
{ multiple-perspective cameras, microphone, speaker, monitor, and space to act }

MAF can track study and verify work done.

Study can be monitored & valued.
Effort spent on a concept can be flame-graphed for difficulty and future comparison.
How the book is read. Highlighting & marginalization.
Which sections of the book created blockage, or were glossed over rapidly.
Interaction with Artificial Intelligence can filter sessions spent pretending.

Eye tracking systems can determine daydreaming or distractions.
Calculations can be separated into active or inactive sessions.
MAF will look for tells of pretending which it can confirm with noting the concept and later testing if the user grasped it.

Phone
Portable devices allow for the user to fill lull time with quality time.
The actions taken accrue into explicit statistics which form a total of types of efforts.
{ quick-quiz, theorem digestion, audiobook, podcast, memorization }

Conversations with Artificial Intelligence to prove comprehension.
This casual method of expression can activate other areas of the brain to serve understanding.

Watch
Track the energy of the user into a pattern.
Over-exhaustion is the main hurdle to consistency has determinable physiological signs.
These all factor into the quality of the daily session:
{ heart-rate, oxygen, sleep, eating, exercise, rest}

MAF can analyze the individual to alert of possible over-exertion.
Instead of battling depression after its deeply established, the user will be informed.

Artificial-Intelligence
Each user is able to choose the type of mentor which will guide him on his journey.
These mentors all tailor the experience to the user, but all rate work in a standard way.
The manner of the presentation and the content is unique to each mentor.

AI Mentors tailor the journey to the student in real time.
Daily effort a spectrum from fast track or a switch-back slow ascent or casual dabble.

Content & delivery adheres to the current mood, arriving in slow steps to a concrete progression standard to the system which culminates in explicit growth.

The schedule is dynamic to the individual goal and not a systemized expectation.
Different micro-routes may be taken but the destination is maintained.

Exist multiple perspectives to approach each skill.
Activity all associate to a standard skillset required by a tree [method of measurement].

AI Mentors evolve in time and so the standings of users age out.
Users must reprove their proficiency periodically.
This path reinforces users to return upon the foundations.
Each new passage is a new trial with an evolved AI Mentor.
Exploiters of the system will be filtered out in time.

Exist various ways to arrive to a standard position.
Technique heavy with arrays of problems.
Theory heavy with one critical problem to ponder.
Construction heavy with a diagram to focus.
Calculation heavy with a series to compute.

From an individual response, Artificial intelligence can extract a standardized solution.
This allows for the interaction to be dictated by the user.
The Mentor will assess the user independent of the manner of interface.

AI Mentors
Geometer
Archimedes: Constructor
Medium: compass & straight

Numeric
Euler: Calculator
Medium: series

Abstraction
Gauss: Rigor
Medium: formula proof

Logic
Boole: Axiomatic Integrity
Medium: syllogism & inference

Common Sense
Poyla: Simplicity
Medium: basic consequence

Intuition
Ramanujan: Polymath
Medium: pattern & symmetry

Foundationalist
Hilbert: Systems
Medium: essays

Progression
First: Understanding of subtopic [foundational comprehension]
Second: Proficiency in application [technical mechanics]
Third: Peer to peer competition
Fourth: Creation for showcase

Flow of progression with each tree [method of measurement].

Users begin interacting with the AI Mentor, which will guide & test comprehension in the subtopic of choice.
Once the user has proved to the AI Mentor full comprehension, the user achieves the status of Conversant.

The AI Mentor now will test the proficiency of the user's ability to apply their understanding to solve problems.
Once the user has proved capable of solution, he achieves the status of Proficiency.

Proficient users are now able to compete with other peers.
In each tree of mathematics, MAF places each proficient user in a global ranking of skill.
This allows for global sourcing of peers of the same class.
Peer to peer competition proves skill to the world with public archives.

Generation
Each end-game generation, every 5 years, has their own ecosystem.
Each user may have a tree of each of their disciplines.

Each tree is generated by the unique way the user does mathematics.
Each tree is adorned with accomplishments.

Users are able to walk thru the forests and see symbolic references to the ways users have performed mathematics.

Users are able to interact in this world. They can socialize, group and compete.

Dungeons exist. Trial ordeals are curated by the top mathematicians.
Problems are personified, but the solutions will be via mathematics.

Tank: algorithmic ability to implement the creative solutions
Wizard: logic abstractionist generalizing the situation into a workable calculation.
Warrior: calculationist which excels in putting theory into practice
Defender: geometric spacial containment, being able to assert power over a space

Enemies consist of grind-level trials, long sessions of resolution, unique monstrosities the embody unresolved questions.

Rewards are titles of profile privilege, trophies to showcase, medals to adorn trees.

Corporate sponsors are able to present content for MAF to generate. Rewards of grants or contractual-positions to the teams who successfully solve the task.
Projects often confront deep issue in unique situations that often take teams of high-level expertise to solve.

Competition
Each user is verified by biometric data. Thus ability is bound to a single entity.
Peer-to-Peer competition has many layers of involvement.
From informal & quick-matches to highly-controlled & lengthy ordeals.
The rewards are also in a spectrum from trivial to professional growth.

AI is the referee of the competition. This allows for an immediate preliminary ranking.
Judges consist of top-ranking users & professionally paid mathematicians. Diverse interpretations of individual work to adjust the verdict to foster non-standard approaches.
Judging is how top-users of a tree are able to compete with top-users of another tree using metrics of community enhancement.
Public archives allow inspection of solutions & judgements.

Competition is not for the elite only.
Each subtopic has its own arena.
World class geometers can compete against high-schoolers in expansions of binomials or in problems of convergence.
One person to one profile anchors ability to the individual.
This allows for easy compilation of similar-tiers of ability.

Only users with approved equipment setups are able to compete in Duels & Ordeals.
To leave a clean-room or introduce non-authorized devices is to automatically end.
Match will be determined on what was done until violation.
Time limit is the maximum allowed.

Ranking adjustments are scaled by the coefficient of type of competition.
Tournaments, being proctored by a third party, hold the most weight in ranking.
Rank attained under proctors will be the most stable.

Quickmatch
- time: 10 minute
- security level: biometric verification & locked app & timely answer
- group of peers given the same problem
- solutions are explicit answers
- tests mainly technique and knowledge
- decision: AI judgement
- REWARD: confirmation of ability tested, lowest-base of global ranking

Duel
- time: 120 minute

security level: multi-camera clean-room
general problem
solution arrived at by method of preference
tests overall ability & comprehension
decision: AI, limited appeal to judges
REWARD: permanent record, ranking adjustment

Ordeal
cost: $5
time: 180 minute
security level: two camera clean-room
group of users
60 mins test
10 min break
120 mins general problem
unique perspective & approach
detail & breadth
decision: judges & AI
REWARD: permanent record, ranking adjustment

Tournament
cost: $20
time:180 minute
security level: testing center
60 mins technical problems & explicit solutions
60 mins essay or proof-exposition
break
180 mins in choice of a selection of problems
decision: professionals & judges
institutions which pay grant & offer endowment are able to set content matter
only MAF will determine the winner
REWARD: gift-card, professional recommendation, medal

Masterpiece
time: 3 months
security level: multi-camera clean-room
creation of a mathematical exposition
decision: community vote-weighted-by-rank
REWARD: placement in generation portfolio

Professional
time: 6 months
security level: none
frontier-expanding paper
decision: professionals
REWARD: grant, world-scholar recommendation

Champion
cost: $300

time: three days
security level: in-person convention
open entry for all
each tree a crowned king
first day: various passages of tournament filters
decision: AI filter
second day: all-day marathon framing the main concept
main concept of the championship problem announced at the start of the year
decision: judge & weighted-community
third day: coronation of the new kings
final round-table face-off determines one above all
decision: professionals, judge & weighted-community
REWARD: major-grant, World Crown, academic endowment

ENDGAME
MAF establishes a progression of a user healthily from start to world-scholar recognition.
All users plow through the initial grind to prove standard ability to the system.
Only proven users enter the end-game world and compete in ranking.

This system blends the competition of gaming and the rigor demanded in professionalism.
What is begun in fun can culminate in deeds that translate into a career path.
{ grants, scholarship, endorsements, certifications, research, teaching }

The networking of the platform extends beyond competition into the ability to form guilds & tutorships of likeminded individuals.

Academia will be balanced with a contender, MAF.
A colosseum of intellectual gladiators whose works are public and whose ability is proved by public competition.
Deeds will dominate privilege.
Mathematics is fun, practical, invigorating, and capable of a career.

Portfolio
The true reward of this project is the showcase of achievements.
The profile allows a full field of growth oriented to individual preference: artistic, unique, comprehensive, detailed, over-arching.
The mind laid out explicitly in the medium of preference.

Standard metrics, ranking, medals, titles, recommendations, portfolio.
Professional personal references accrued.
How you contributed to your generation.
Quality rated in each field of mathematical measurement.

Respect of the community due as reward from competition.
Honor from academia & world certified experts.

Each user has a global ranking in each tree of the mathematic forest.

Each global ranking is compiled each day.
All rankings are publicly accessible.
Accomplishments are permanent.

Users are able to challenge others to supplant their position.
Those who are inactive will fade off the charts.
Whatever privilege placement is able to form will be subject to the public-visible duel-challenge.

All accomplishments will be retained forever in the profile.
As this system ages, generations will be able to compare the current & past.
Generational strengths will be assessed on the whole of mathematics explicitly produced and retained in a pool of images.