



The CLEAN PAPER

WHAT THE PAPER SAYS · WHAT IT DOESN'T · WHY IT MATTERS

Developers muuxannoo qaban AI waliin saffisaa ta'uu isaanii itti dhaga'ame, garuu safartuun isaan suuta hojjechaa turan — bu'aa dhugaa, verdict AI coding miti

RCT METR developers open-source muuxannoo qaban 16 tasks dhugaa 246 codebases isaan beekan irratti hojjechiise; tasks walakkaa random irratti tools AI jalqaba-2025 eeyyamame. Isaan AI task time naannoo 24% hir'isa jedhanii eegatan; faallaa isaa, completion time 19% ol kaase — fi hojii booda illee AI naannoo 20% saffisiise jedhanii amanan. Perception gap kun core jabaataa dha. Garuu developers 16, setting daangeffame tokko, snapshot jalqaba-2025 qofa: authors AI developers baay'eefhin gargaartu jechuun hin agarsiifne jedhu, fi follow-up 2026 isaanii speedup gara ta'uutti akeeka, caveats waliin.

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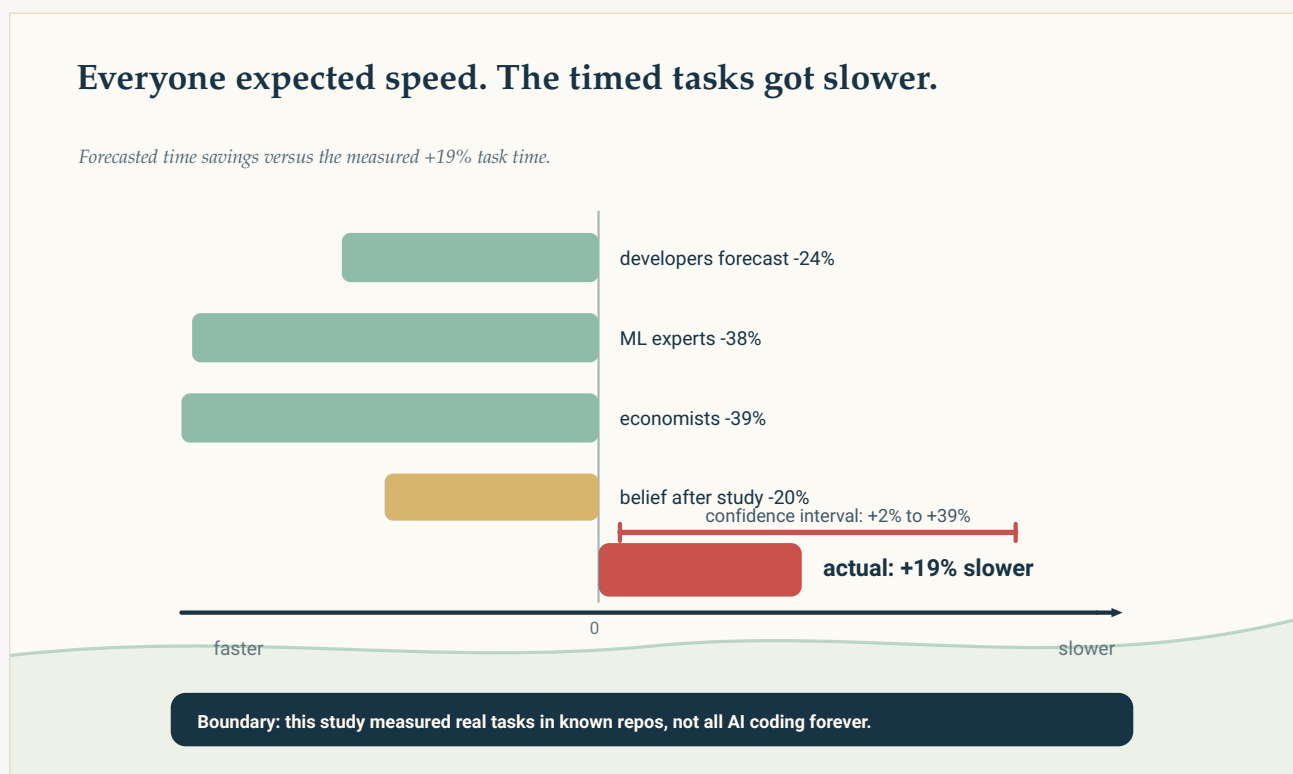
Paper: *Measuring the Impact of Early-2025 AI on Experienced Open-Source Developer Productivity*, Joel Becker, Nate Rush, Beth Barnes, David Rein (METR), arXiv:2507.09089 [cs.AI] (preprint) · DOI: 10.48550/arXiv.2507.09089

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Developer muuxannoo qabu tokko AI coding assistant saffisa hojii isaa guddisuu isaa yoo gaafatte, yeroo baay'ee lakkoofsa tokko siif kenna: “20%, 30% yeroo naaf qusata.” Economist yookaan machine-learning researcher yoo gaafatte, lakkoofsi sun caalaatti guddata. Jalqaba 2025 keessatti gareen METR hojii suuta, qaalii garuu sirrii tokko godhe: safare. Developers banaa-source muuxannoo qaban 16 fudhatanii, codebases gurguddoo isaan sirriitti beekan irraa hojiiwwan dhugaa 246 kennan; hojii tokko tokko coin-flip fakkaatuun tasaa ta'ee AI meeshaalee fayyadamuun eeyyamame yookaan dhorkame. Achiis yeroo hojii safaran.

Developers AI hojii yeroo isaanii naannoo 24% hir'isa jedhanii tilmaaman. Faallaa isaa ta'e: hojiiwwan AI waliin hojjataman **19% yeroo dheeraa** fudhatan. Kutaan itti yaaduu qabnu ammoo kana: hojii xumuranii booda developers sanuma AI isaan saffisiise jedhanii amanan — naannoo 20%. Safartuun isaan suuta turan, garuu itti dhaga'ame saffisaa turan. Fageenyi lakkoofsa lama kana gidduu jiru qorannoo kana keessaa wanta nama hawwatu guddaa dha.

Kun bu'aa dhugaa, of-eeggannoon safarame dha. Garuu developers 16, repositories isaan baay'ee beekan, meeshaalee jalqaba 2025 fayyadaman qofa — kanaaf “AI developers suuta godha” jechuun hima waliigalaa miti. Daataa team sanaa boodarraa illee kallattii faallaa agarsiisuu jalqabeera.



Namni hundi AI hojii saffisiisa jedhee tilmaame — developers –24%, ML experts –38%, economists –39%, fi developers hojii booda amanan –20%. Stopwatch ammoo +19% suuta jedhe, daangaa amanamummaa +2%

hanga +39%. Garaagarummaan “itti dhaga’ame” fi “safarametti” gidduu jiru bu’aa ijoo dha.

Original diagram — The Clean Paper CC BY 4.0

What this AI-productivity study measured

THIS IS

- 16 experienced open-source developers
- 246 real tasks
- repositories they knew
- randomized and timed
- early-2025 AI tools

THIS IS NOT

- not most developers
- not every domain
- not a fixed law
- not peer-reviewed
- not a verdict on future tools

Boundary: useful evidence about one setting, not a universal law of AI work.

qorannoon maal safare — developers banaa-source expert 16, hojiiwwan dhugaa 246, repos isaan beekan, meeshaalee jalqaba-2025, randomization fi timing — fi maal hin safarre: developers baay’ee, domains hunda, seera yeroo hundaa, gamaaggama ogeessotaa keessa darbe verdict, yookaan meeshaalee gara fuulduraa.

Original diagram — The Clean Paper CC BY 4.0

Qorannoon kun maal safare, RCT’n maal nuuf dabalata

akka carraatti ramadame to’atame yaalii (RCT) medicine keessatti dhiibbaa dhugaa fi abdii qofa adda baasuuf meeshaa ijoo dha. As hojiiwwan 246 tokko tokko AI eeyyamame yookaan dhorkameetti tasaa ta’anii ramadaman; kanaaf giddugaleessa irratti garaagarummaan systematic piles lamaan gidduu jiru AI mataa isaa ta’a. Kun “AI yeroo jijjiire” jechuun sababummaa irratti dubbachuuf carraa kenna, AI filatan duraanuu saffisaa yookaan suuta waan ta’aniif qofa miti. Himannoowwan productivity AI hedduun self-report fi madaallii wabii irratti hirkatu; isaan sababa-qabeessa dhiibbaa kana adda baafachuu hin danda’an. Madaallii wabii hojii dhugaa miti, self-report ammoo qorannoo kana keessatti akkuma mul’atutti confident ta’ee dogoggoruu danda’a. Developers as jiran novices miti; projects banaa-source gurguddoo, mature fi isaan bara hedduuf irratti hojjetan keessatti contributors beekamoo turan.

Barreessitoonni maal godhan

- **akka carraatti ramadame to'atame yaalii** raawwatan (METR: Joel Becker, Nate Rush, Beth Barnes, David Rein). Developers banaa-source muuxannoo qaban 16, tokko tokko repository gurguddaa yeroo baay'ee itti contribute godhan fi sirriitti beekan irratti hojjetan — project tokko irratti giddugaleessa waggaa shan.
- **Hojiwwan dhugaa 246** fayyadaman — bug fixes, amaloota fi refactors dhimma trackers project sanaa irraa. Hojii tokko tokko tasaa ta'ee “AI allowed” yookaan “AI disallowed” ta'e.
- “AI allowed” jechuun **tooling jalqaba-2025: Cursor Pro + Claude 3.5/3.7 Sonnet**. Safartuun primary yeroo xumuraa hojii tokkoo dhugaa ture. Teamichi forecasts developers hojii dura kennan, tilmaamota hojii booda kennan, fi tilmaamota economists fi machine-learning experts illee walitti qabe.

Maal argatan

- **AI waliin hojiwwan 19% yeroo dheeraa fudhatan.** Saffisaa miti — suuta. 95% daangaa amannummaa naannoo +2% hanga +39%; direction isaa jajjabaa dha, sirrii hammamtaa irratti shakkii jiraatus.
- **Namni hundi faallaa isaa tilmaame.** Developers 24% speedup; machine-learning experts naannoo 38%; economists naannoo 39%. Gareen sadii AI yeroo baay'ee qusata jedhan; stopwatch ammoo yeroo dabale agarsiise.
- **Perception gap.** Hojii suuta xumuranii booda illee developers AI naannoo 20% saffisiise jedhanii tilmaaman — gara 40 dhibbeentaa qabxiilee garaagarummaa felt dhiibbaa fi safarame dhiibbaa gidduu.
- **Sababoota kan filatame, garuu mirkanoofne miti.** Barreessitoonni wantoota dhiibbaa qaban slowdown ibsuu danda'an tarreessu: developers codebases isaanii baay'ee beekan, kanaaf assistant dabaluu qabu xiqqaa; projects mature qulqullina standards ifa hin taane qabu; repositories gurguddoo haala moodeela hin qabne hedduu qabu; yeroo dhugaan prompting, reviewing fi AI bu'aa sirreessuu irratti deema. Isaan kana hypotheses akka ta'an dhiyeessu, verdict miti.

Kun maal hin agarsiifne

- AI developers baay'ee saffisiisuu hin danda'u jechuu **hin agarsiisu**. Barreessitoonni ofumaa jedhu: experts 16 koodii isaan qalbiin beekan irratti hojjetan giddugaleessa developer miti.
- AI faayidaa hin qabu, yookaan settings biroo keessatti nama suuta godha jechuu hin agarsiisu — newcomers codebase, greenfield hojii, programming afaanota hin beekamne, yookaan dameewwan biroo.
- Meeshaalee akka jirutti yeroo hundaa hafu hin jedhu. Kun Cursor + Claude 3.5/3.7 Sonnet jalqaba-2025 dha; meeshaalee fooyya'aa yookaan akkaataan itti fayyadaman jijjiiramuun setting sanuma keessatti bu'aa jijjiiruu danda'a.

- Kun **barruu duraa** dha (July 2025, gamaaggama ogeessotaa hin dabarre), fi barreessitoonni artifacts yaalii guutumaan guutuutti keessaa baasu hin dandeenye jedhu; garuu argannoo xiinxalawwan isaanii hedduu keessatti dhaabbate.
- Developers AI irraa karaa biraatiin faayidaa argatan jechuun reassurance hin kennu — baratan, gammadan, koodii qulqullina fooyya’e — qorannoon kana hin safarre. Wanti safarame, felt speedup, daataa waliin faallaa dha.

Ragaan hammam cimaa dha

- **Qophii isaa haala kana keessatti baay’ee amanamaa dha.** akka carraatti ramadame, hojiiwwan dhugaa, repositories dhugaa, yeroo dhugaa — self-reports fi madaallii wabii leaderboards himannoowwan AI coding hedduu caalaa jabaataa. Slowdown 19% robustness sakatta’awwan barreessitootaa keessa ture.
- **Argannoo bal’inaan namaaf fayyadu perception gap dha.** Expert intuition speedup AI mataa isaanii irratti gara 40 qabxiilee optimistic ta’ee dogoggore. Kun self-reported productivity gains AI hundaaf warning dha — qorannoo kana keessaa lakkoofsota illee dabalatee.
- **Snapshot dha, trend miti.** hordoffii METR February 2026, developers gosa wal-fakkaataa fi meeshaalee haaraa fayyadamee, speedup gara ta’uutti akeeka — returning developers gara –18%, haaraa ones –4% — garuu barreessitoonni ragaa dadhabaa fi hirmaataa selection, pay saffisa jijjiirama fi hojii selection skew irraa jeeqamu jedhu. Dubbisuu sirrii: picture socho’aa jira, fi sochiin sunis caveats qaba.

Maaliif barbaachisaa dha

Marii AI fi programming hedduun demos fi “vibes” irratti deema: iskiriinii recording bareedaa, himannaa confident, fi namni biraa “hin ta’u” jedhu. Wanti baay’ee xiqqoo argamu, fi barruu kana dubbisuuf sababni, namni tokko yaalii boring garuu sirrii godhe: akka carraatti ramaduu, hojii dhugaa yeroo safari, achiis namoonni akkam itti dhaga’ame gaafadhu. Deebiin camps lamaanaf mijataa miti. Inni AI experts koodii isaanii beekan irratti yeroo hunda turbocharge godha jedhu ni dadhabsiisa. Garuu faallaa salphaa “AI developers suuta godha, ragaa jira” jedhu illee hin deeggaru, sababni isaas daataa haaraan team sanuma irraa kallattii faallaa agarsiisu jalqabeera. Barumsi yeroo dheeraa jiraatu caalaatti xinnaa fi namaa dha: namoonni hojii hojjetan **saffisaa itti dhaga’ame, garuu safartuun suuta turan**. “Saffisaa itti dhaga’ama” ragaa miti. Safaruun barbaachisa.

Cuunfaa gabaabaa

akka carraatti ramadame to’atame yaalii keessatti METR developers banaa-source muuxannoo qaban 16 hojiiwwan dhugaa 246 codebases isaan beekan irratti hojjechiise; hojiiwwan walakkaa tasaa irratti meeshaalee AI jalqaba-2025 (Cursor Pro + Claude 3.5/3.7 Sonnet) eeyyamame. Developers AI hojii

yeroo naannoo 24% hir'isa jedhanii eegatan; faallaa isaa, completion yeroo **19% ol kaase** — fi hojii booda illee AI naannoo 20% saffisiise jedhanii amanan. Perception gap kun qorannoo kana keessaa core jabaataa dha. Garuu developers 16, setting daangeffame tokko, snapshot jalqaba-2025: barreessi-toonni AI developers baay'eef hin gargaartu jechuun hin agarsiifne jedhu, fi hordoffii 2026 isaanii speedup gara ta'uutti akeeka, caveats ofumaa waliin. Safartuu of-eeggannoo qabu, verdict AI coding miti.

Maddoota

J. Becker, N. Rush, B. Barnes, D. Rein (METR), Measuring the Impact of Early-2025 AI on Experienced Open-Source Developer Productivity, arXiv:2507.09089 [cs.AI] (2025)

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